SYSTEMATIC NOTES ON THE INDIGENOUS AUSTRALIAN FLORA

by

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SUMMARY

In this paper: 11 species and 5 varieties are described as new, with some discussion on their affinities and distributions; 20 new nomenclatural combinations are effected, with appropriate comments; 6 synonymies of specific names are established; the ranges of 10 other species are extended into Victoria, and noteworthy extensions are made to the distribution within that State of 5 very localized taxa. Arrangement of families is according to the system of Engler and Prantl.

Proteaceæ

GREVILLEA JEPHCOTTII *J. H. Willis* spec. nov.

> ex affinitate *G. lanigerae* A. Cunn. a qua praecipue differt: statura majore (1–3 m.); ramis manifeste verticillatis; foliis suberectis latioribus (3–6 mm.) subpungentibus, supra laete viridibus scabrisque, subter glaucescentibus glabrisque; floribus pallide viridibus, in racemis perbrevibus densis; stylis comparate brevibus (5–7 mm.).

HOLOTYPE: S.W. slopes of Pine Mountain (± 7 miles S.E. of Walwa), Upper Murray region, Victoria, among granite rocks in dryish eucalypt forest at ± 620 m. (2,000 feet) alt.—*J. H. Willis,* 17 Nov. 1964 (MEL). *ISOTYPES* at Mel, NSW, BRI, AD, CANB, K.

PARATYPE: *Ibidem*—*J. H. Willis,* 15 Jan. 1964 (MEL, *cum fructibus*).

Also examined (all in MEL): Pine Mountain, N.E. Victoria—*Jeanie H. Harvey,* Aug. 1963; *ibidem*—*Carl Walter,* Nov. 1891, *S. W. Jephcott,* 1878; Hume River—*S. W. Jephcott,* 1883 & Oct. 1887; Upper Murray—*C. French* Jr., Nov. 1886.

Shrub 1–3 m. (3–9 feet) high, rigidly erect, dense, leafy, low and bushy in exposed rocky situations but tall in more shaded forest, the branching conspicuously and often distantly verticillate; branchlets (also young foliage) loosely hairy. *Leaves* ± erect, ovate-lanceolate to lanceolate or somewhat oblanceolate, 1·5–3·5 cm. long, 3–6 mm. (sometimes 8 mm.) wide, bright green, paler beneath, chiefly flat but the entire margins ± revolute, terminating in a fine ± pungent point 1–2 mm. long; upper surfaces somewhat shining, but scabrid and minutely tuberculate all over; under surfaces glabrous, dull blue-green, appearing almost glaucous in dried state, the narrow mid-rib conspicuous but other veins obscure. *Flowers* 6–9 in dense, terminal, leafy clusters (very reduced racemes) and rather inconspicuous amongst the foliage, on glabrous glaucescent pedicels 4–6 mm. long. Perianth glabrous externally but white-villous inside (toward base), pale green but assuming reddish-purple tints in drying, ± 5 mm. high and 3–4 mm. broad at the dilated base, recurved through a semicircle above, the cucullate antheriferous laminae ± 2 mm. long and wide; torus straight, 1·5 mm. wide, 0·3 mm. thick; hypogynal gland semicircular, pale at first, contrasting with darker torus to which it is equal in width and thickness. *Ovary* sessile, purplish, 4–5 mm. long, loosely white-villous with hairs 1·5 mm. long; style relatively thick, 5–7 mm. long, purplish, glabrous toward apex; stigmatic disc green, lateral, 2 mm. wide, scutelliform with short central nipple. *Anthers* pale yellow, 0·7 mm. long. *Follicle* dull brown, with scattered soft hairs, broadly ellipsoid, 10–15 x 4–7 mm., 0·4 mm. thick, the style and stigma persisting. *Seed* resembling a click-beetle, date brown, narrowly ellipsoid, plano-convex, 8–10 x 2–3 mm., with whitish aril 1·5 mm. long.

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* National Herbarium of Victoria.

Affinities of the new species are with *Grevillea lanigera* A. Cunn. which differs in its non-verticillate branching, more spreading narrower leaves that are hairy on both surfaces, never becoming glaucous beneath and lacking a ± pungent mucro, also in the longer racemes of coloured flowers (chiefly reddish) with longer styles.

Up to the present, *G. jephcottii* is known only from the south-western portion and summit area of Pine Mountain, where locally abundant; but its occurrence on similar granitic ranges along the Upper Murray, both in Victoria and New South Wales, may be anticipated.

The epithet was chosen as a mark of respect to the Jephcott family of Ournie, on the Upper Murray River above Jingellic, N.S.W., especially to Sydney Wheeler Jephcott who discovered the plant when only fourteen (in 1878) and who died at the age of 86 on 3rd July 1951. His father, Edwin Jephcott, had taken up land at Ournie during 1864. There he gradually established a magnificent arboretum of exotic trees, and was in early contact with Baron von Mueller who visited him in January 1874. Father and son also maintained a lifelong interest in the native flora, delighting to ramble over Pine Mountain on the opposite side of the Murray. They were the first to collect specimens on this floristically rich granite range.

BANKSIA CANEI *J. H. Willis* spec. nov.

ad *B. marginatam* Cav. (cum qua olim confusus est) et *B. integrifoliam* L.f. evidenter proxime accedens; sed a formis omnibus prioris differt costa folii subter ± hirsuta, valvis capsulae magnioribus spisse tomentosis, et praecipue perianthiis stylisque post anthesin omnino deciduis; a *B. integrifolia* recedit statura multo minore, foliis angustioribus, seminibus comparate latioribus; a his speciebus duobus foliis constanter pungentibus (in statu maturo interdum dentatis) distinguitur.

HOLOTYPE: Mt. Seldom Seen track, Wulgulmerang, E. Victoria, in montane forest at ± 900 m. (2,900 feet) alt.—*J. H. Willis*, 27 Nov. 1962 (MEL). *ISOTYPES* at MEL, NSW, AD, K.

Also examined (all in MEL): Splitter's Creek near "Rockbank", Wulgulmerang, E. Victoria—*J. H. Willis,* 3 Dec. 1962; Brumby Point, Nunniong Plateau, E. Vic. at 1250 m.—*J. H. Willis,* 17 Nov. 1964; Wellington River, on road to Bennison High Plains between Mts. Wellington & Selma, E. Vic.— *W. Cane,* 9 Jan. 1963; "High mountains at the Mitta Mitta" River, N.E. Victoria—*F. Mueller,* Jan. 1954; Near Kybean "on exposed windswept sites with *Casuarina nana,* 1–2 feet high", S.E. New South Wales—*A. B. Costin,* May 1949 (also in Herb. NSW n. 77821); Kybean, near Kydra Trig. Station, "2–5 feet high, on Great Dividing Range, conglomerate formation, 3,600–4,000 feet, N.S.W."—*R. H. Cambage* n. 1994, 4 Nov. 1908 (also in Herb. NSW n. 77820).

Shrub 1–2·5 m. (3–8 feet) high and wide, sometimes dwarfed to 30 cm. on exposed mountain heaths, compact, flat-crowned, branched almost to base; young branchlets tomentose. *Leaves* often subverticillate, 4–8 cm. long, 4–8 mm. wide, erecto-patent, rigid, slightly revolute at margins which in seedling stage bear 4–8 spreading, triangular, distant spiny teeth along each side, but are fewer-toothed (mostly in upper half) to quite entire when adult; apex sometimes ± truncate but always terminating in a pungent point ± 1 mm. long; upper surfaces glabrous, somewhat shiny with depressed mid-vein; under surfaces adpressedly white-cottony, except on broad bold mid-rib which is variably hirsute with bristly, white or brownish hairs to 1 mm. long. *Inflorescence* a dense, many-flowered, pallid yellow spike 6–12 x 4–6 cm. at anthesis; subtending basal bracts numerous, to 1 cm. long, greyish, shortly and densely villous, contracting from a broad-lanceolate base into a long subulate apex, floral bracts short and thick, including the dense pale-ferruginous to silvery tomentum ± 4 x 2· mm., the 2 hairy bracteoles similar but smaller. *Perianth* ± 15 mm. long, white-villous except on basal tube which is glabrous for 2–3 mm.; antheriferous laminae ± 3–4 x 0·7 mm., narrowly elliptical, on slender almost filiform claws. *Ovary* minute (0·5–0·7 mm. long), entirely concealed among the bracteoles and hair covering the woody axis, ovoid, glabrous, 4-lobed at base, with 8 bold vertical ribs; style wiry, rigid, 2 cm. long, 0·5 mm. wide at base, straw-yellow, glabrous and shining, at first strongly arcuate, but remaining ± inflexed after anthesis, the stigmatic tip dark, cylindro-conic, 1 x 0·2 mm. *Anthers* on short thick filaments (? or sterile bases), elliptic, 1·5 x 0·5 mm., pale yellow with dark sterile tips. *Fruiting cone* erect, conspicuous, up to 12 cm. long and 3–6 cm. wide, its timber hard and pinkish-brown, bearing up to 100 velutinous fertile capsules (but usually much fewer), completely devoid of dead floral remains. *Mature capsules* partly embedded in upgrowth of the woody axis, dolabriform, 1·5–2·5 cm long and wide, ± 1 cm. high, the woody valves each 3–5 mm. thick, densely covered with an indumentum of woolly-velvety hairs (to 2 mm. high) that are ferruginous at the cone-axis but paling to greyish or creamy-white at the semicircular and glabrous suture. *Seed* 12–15 x 8–10 mm., nigger-brown to blackish, the basal embryonate portion 6–8 x 4 mm. and ±

semicircular, the broad wing rugulose and somewhat lustrous; septum broadly cuneate, similar in size and shape to seeds, dark brown, dull, toughly coriaceous to almost woody.

The new species is closely related to *B. marginata* Cav. (with which it has been confused in the past) and to *B. integrifolia* L.f. It differs from all forms of *B. marginata* in having the under-surfaces of leaves with ± hairy midribs, the cones and capsules larger, the capsular valves paler and more thickly tomentose, and especially in the perianths and styles being completely deciduous after anthesis. It departs from *B. integrifolia* in much smaller stature, more horizontally spreading habit, manifestly narrower leaves and relatively broader seeds (which are narrowly cuneate in *B. integrifolia*, with embryonate part 10 mm. long), and from both species in the constantly pungent-pointed leaves which are sometimes toothed in the adult stage. The seeds are somewhat intermediate in character between those of *B. marginata* and *B. integrifolia.*

B. canei has a scattered, subalpine distribution in Victoria between the watershed of the Macalister River and the Murray–Buchan R. divide, occurring in four principal centres where locally quite abundant. It reappears in the high rocky Kybean section of the Dividing Range near Nimmitabel, N.S.W., and may be present in some of the mountainous tracts lying between there and the Victorian border. A collection in Melbourne Herbarium from Mt. Fulton at Port Davey, far S.W. Tasmania (Apr. 1954), has somewhat pungent leaves, strongly resembling those of *B. canei*; but the withered perianths and styles are persistent on old cones, as in *B. marginata* of which it may be a form. Unfortunately, no capsules or seeds are present.

The epithet *canei* is a tribute to Mr. William Cane, nurseryman and apiarist of Maffra, who reported the occurrence of this *Banksia* in the Wellington River region, recognized its distinctiveness from *B. marginata* and supplied copious notes and specimens to the writer. Mr. Cane is responsible for many interesting botanical discoveries in Gippsland, extending the known range of several uncommon species.

Santalaceæ

SANTALUM LANCEOLATUM *R. Br.* Prodr. Flor. Nov. Holl. 356 (1810)

Probably the most noteworthy botanical discovery in Victoria during the past decade is that of Northern Sandalwood or Plum Bush (*Santalum lanceolatum*), which was located on the eastern slopes of the Warby Range (some 5½ miles west of Wangaratta) by Miss D. Nason, a local resident at " Kurring-gai ", about 1959. The occurrence was restricted to two very old, gracefully pendulous trees—each about 25 feet high—growing among rocks at the foot of the waterfall in Brien's Gorge. No other examples are known in this State, the nearest being about 83 miles to the north-west (2 miles N.N.E. of Mathoura, which is by far the southernmost occurrence in New South Wales). Unfortunately, one of the pair died during 1964, so that the solitary survivor must now represent the rarest indigenous woody species in Victoria. There are three collections from this Brien's Gorge sandalwood at Melbourne Herbarium, as follows:—

R. D. Croll, 6 Oct. 1961; Miss *Jean Galbraith*, 5 Mar. 1962; *A. B. Court & J. H. Willis*, 2 June 1962.

Ranunculaceæ

RANUNCULUS PACHYCARPUS *B. G. Briggs* in Proc. Linn. Soc. N.S.W *84*: 301–2, fig. 11–16 (1960).

This species, described so recently, was recorded for several localities in New South Wales and South Australia. Its occurrence also in Victoria was only to be anticipated and has now been confirmed. Following are details of three Victorian collections at Melbourne Herbarium:—

Pine Mountain, ± 6 miles S.E. of Walwa, in damp mossy places among slabs of granite rock at about 620 m. (2,000 feet) alt.—*J. H. Willis*, 17 Nov. 1964; Anderson's Creek near Warrandyte, on "deserted gold diggings"—*G. Renner*, 1887, (*det. tentat.* B. G. Briggs, 5/2/1965); "Wimmera"—W. E. Matthews, 1893 (*det.* B. G. Briggs, 5/2/1965).

Ranunculus pachycarpus is closely related to the much more widespread *R. lappaceus* Sm., from which it may immediately be distinguished in the fruiting state by its plump, turgid, almost *globular* achenes with very thick pericarp and stoutish beak. The habitat varies enormously, from rather arid tracts at Mt. Brown near Port Augusta (TYPE) locality) to Mt. Lofty Ranges in South Australia, through west, south-central and far north-eastern Victoria to the Macintyre River (bordering N.E. New South Wales and Queensland).

Mimosaceæ

ACACIA PHASMOIDES *J. H. Willis* spec. nov. [Tab. X]

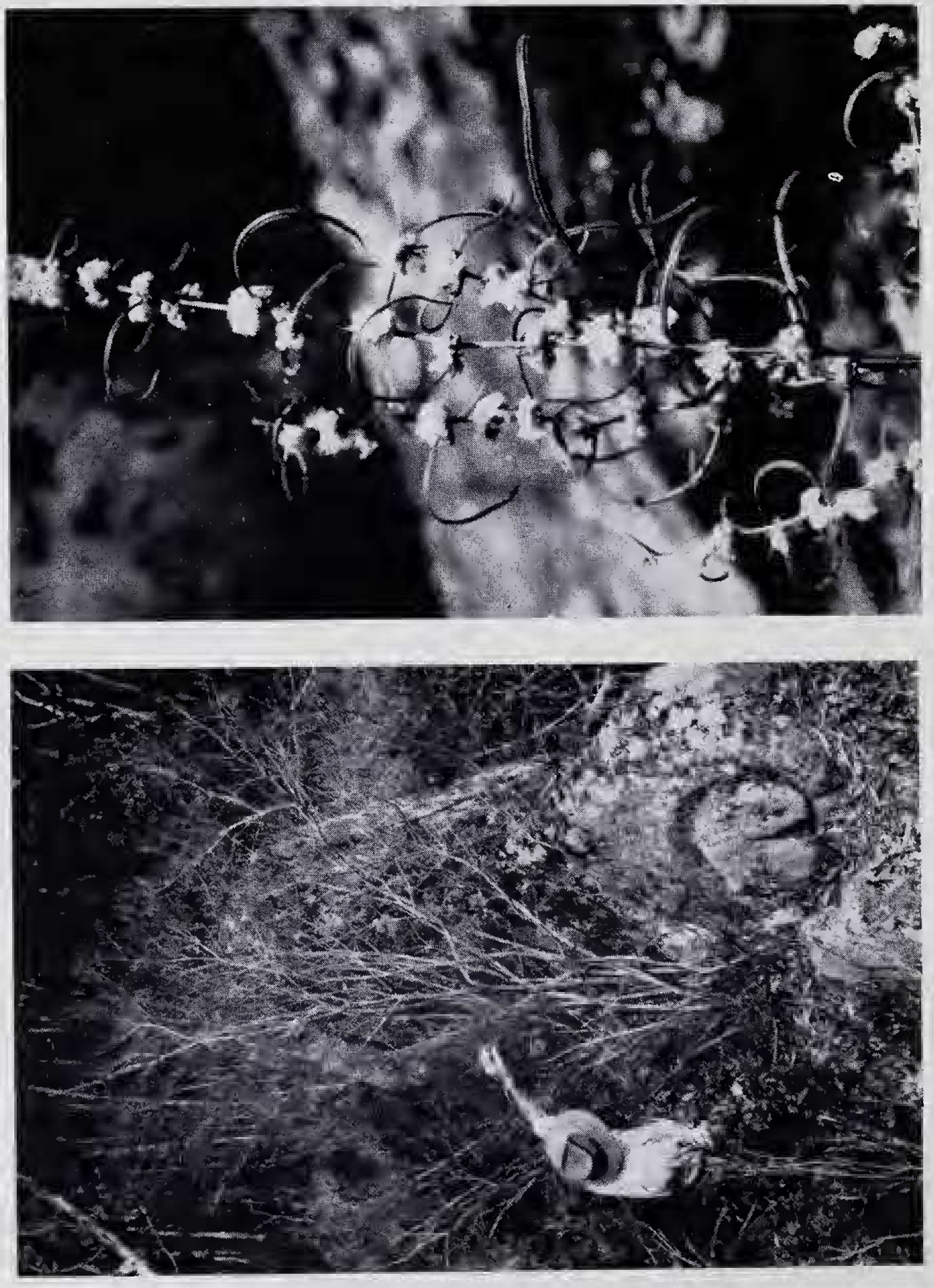
ut videtur *A. diffusa* Lindl. affinis, sed manifeste differt sic: ramis tenuioribus apertisque; phyllodiis longioribus (4–7 cm.), plus minus incurvis, flexilibus, nunquam pungentibus (tantum mucronatis), minus conspicue articulatis; floribus 8–12 in spicis brevissimis sessilibus geminis axillaribus hirsutis; fructu arcuato, angustiore (2·5–4·5 mm. lato — cf. 5 mm. in *A. diffusa*); seminum funiculis laxe sigmoideis (*non* multo crasse plicatis).

HOLOTYPE: (cum floribus post anthesin): Pine Mountain, far N.E. Victoria ± 6 miles S.E. of Walwa, among granite rocks about ½ mile S.W. of highest peak and at ± 760 m. (2,500 feet) alt.—*J. H. Willis & K. C. Rogers*, 17 Nov. 1964 (MEL).

PARATYPES: *Ibidem*—*J. H. Willis & K. C. Rogers*, 17 Nov. 1964 (MEL, NSW, CANB, BRI, AD, K); *ibidem*, cum fructibus—*Willis & Rogers*, 15 Jan. 1964 (MEL, NSW).

Also examined (both in MEL): Pine Mountain, far N.E. Victoria, in a steep granitic ravine above Pine Mtn. Ck. (at ± 615 m. alt.), about 7½ miles S.E. of Walwa—*J. H. Willis*, 16 Jan. 1964; "Hume River" (but almost certainly Pine Mountain) —*S. W. Jephcott*, 1883, *cum floribus*.

PLATE X



Acacia phasmoides sp. nov.

Above: The HOLOTYPE *in situ* (branch with almost spent flowers) on Pine Mountain, Vic., at ± 2,500 feet.

Below: Mature shrub among granite rocks on Pine Mountain, far N.E. Victoria (at ± 2,500 feet).

Very slenderly branched open shrub 1–2 m. (3–6 feet) or rarely to 3 m. high; trunks smooth, silvery-grey, the branches terete to slightly angular, grey-brown to reddish and minutely pubescent when young. *Phyllodes* glabrous or sparsely sprinkled with minute appressed hairs, widely spaced and spreading but arcuately incurved, flexible, very narrow-linear, 5–8 cm. long, 1–2 mm. wide, slightly flattened vertically but ± quadrangular (with cruciform section) toward base; apex shortly mucronate and often ± hooked; marginal gland small, axillary (at extreme base); petiole ± 1 mm. long; nervation consisting of a single prominent, central, rib-like vein on the narrow surface, with an obscure secondary vein or longitudinal wrinkle on each side of it, both mid-veins and leaf margins appearing asperulate (from resinous tubercles) under the microscope. *Inflorescences* yellow, axillary, sessile, in pairs, each 6–10 mm. wide at anthesis and consisting of 8–12 flowers on a very short adpressedly hairy spike (cf. *A. diffusa* with capitula of ± 20 flowers on glabrous peduncles 5–15 mm. long). *Perianth* 4-partite, firm, ± 2·5 mm. long; calyx $\frac{1}{3}$ the length of corolla, dark, sprinkled with appressed white hairs and ciliate on margins, split for about $\frac{1}{3}$ its length into very broad lobes; corolla lobes glabrous, ovate-elliptic, yellow, the apical margins incurved and indurate; filaments extremely numerous, with microscopic anthers (less than 0·1 mm. long); ovary densely white-hirsute, the styles on very young fruits 4–5 mm. long. *Pod* slender, arcuate to sigmoid, narrow-linear, 5–9 cm. long, 2·5–4·5 mm. wide, at first densely white-pubescent, finally with scattered, minute and appressed hairs. *Seeds* ± 3–6, longitudinal in pod, irregulary developed, 3–4 mm. long, 1·5–2 mm. wide; aril pale, very small, passing into a relatively broad funicle with short sigmoid fold at end of seed.

The new species most closely approaches *Acacia diffusa* Lindl. from which it differs thus: branches open and more slender; phyllodes flexible, longer, more or less inarched, less articulate and never pungent; flowers 8–12 in very short, sessile, hairy axillary spikes; perianth firmer and longer; calyx hairy, with broad lobes split less than half way to base; pods narrower; seeds smaller (4·5–6 x 3 mm. in *A. diffusa*) with laxly sigmoid, *not* closely and much folded, funicle.

At the present time, *Acacia phasmoides* is known only from a few high rocky parts of Pine Mountain; but it should be looked for on similar terrain adjoining both sides of the Upper Murray River. The epithet was bestowed in order to emphasize the extremely open, wraith-like appearance of this insubstantial shrub.

Papilionaceæ

DAVIESIA MIMOSOIDES *R. Br.* in Ait.f.

var. LAXIFLORA (*J. H. Willis*) *J. H. Willis* comb. nov.

D. corymbosa Sm. var. *laxiflora* J. H. Willis in *Vict. Nat.* 73: 190 (1957).

The original description (1957) of this montane population was made in the belief that *Daviesia mimosoides* should be included under *D. corymbosa*—an opinion shared by G. Bentham (1864), F. M. Bailey (1900), Maiden and Betche (1916). In *Contr. N.S.W. Herb. Flora Series n.101* pt. 1: 33–35 (1961) Joy Thompson re-defined *D. mimosoides* and *D. corymbosa*, retaining both species and restricting the latter to New South Wales (between the Blue Mountains and Sassafras). Her chief points of difference were the *racemose*, inflorescence and often rather inconspicuous venation in leaves of *D. mimosoides*, contrasting with the *corymbiform* inflorescence and strongly reticulate leaves of *D. corymbosa*. Under this concept the Victorian *D. corymbosa* var. *laxiflora* would certainly be referable to *D. mimosoides*; and, for the sake of uniformity with present usage in New South Wales, the above new varietal combination has been effected.

DILLWYNIA CAPITATA *J. H. Willis* var. ULIGINOSA *J. H. Willis*

varietas nova a forma typica speciei differt sic: habitatione uliginosa, caulibus filiformibus lentis procumbentibus atque foliis (4–6 mm. longis) et bracteolis (minus quam 1 mm.) constanter brevioribus.

HOLOTYPE: Mt. Stradbroke near Black Mountain Station, Wulgulmerang, E. Victoria, on swampy ground with *Epacris microphylla* etc., at ± 1,100 m. (or 3,600 feet) alt.—*K. C. Rogers*, 9 Dec. 1962 (MEL). *ISOTYPES* at MEL & NSW.

Also examined: *Ibidem*—*K. C. Rogers*, 2 Dec. 1963 & 25 Nov. 1959 (both in MEL).

The new variety differs from the typical form (known only by a single type collection, 4 Nov. 1949, from Clover Dam near Bogong) in its swampy habitat, tough wiry procumbent stems and consistently shorter leaves (4–6 mm. long) and bracteoles (less than 1 mm.). As far as known at present, it appears to be restricted to swampy subalpine ground flanking the granitic Mt. Stradbroke. It is remarkable that the only occurrences of both species and its paludal variant should be so extremely localized. The variety *uliginosa* bears an astonishing superficial resemblance to a trailing form of *Pultenaea subumbellata* Hook. that occurs at Digger's Holes on the Nunniong Plateau, only about 17 miles W.S.W. of Mt. Stradbroke. But the latter plant has minute stipules, a longer (5 mm.) villous calyx that is *not* abruptly contracted into the pedicel, and very much longer bracteoles (2–3 mm.).

PULTENÆA MOLLIS. *Lindl.* in Mitch. Three Exped. E. Aust. *2*: 258 (1838).

P. angustifolia H. B. Williamson in *Proc. roy. Soc. Vict.* new ser. *40*: 57 (1928).

Examination of a wide selection of specimens of both *Pultenœa mollis* and *P. angustifolia* has convinced the writer that these two entities cannot be satisfactorily separated at the specific level. Typical

P. mollis (from Mt. Sturgeon area at the southern extremity of the Grampians) certainly has coarser, broader (to 1·5 mm. wide) leaves and larger more congested heads of almost sessile flowers than any form of *P. angustifolia*, but in Portland district there appears to be a complete gradation from one extreme to the other. As certain other species (e.g., *Pultenæa scabra, Epacris impressa, Prostanthera lasianthos, Westringia glabra*) also exhibit distinctive forms on the Grampians, there is no reason to regard the type form of *P. mollis* there as specifically different from the more usual narrow-leaved condition ("*P. angustifolia*") in various parts of Victoria. Considerable diversity exists amongst material from the four syntype localities —Grampians, Mt. Macedon, Gembrook Ranges, Bairnsdale—cited by Williamson in his description of *P. angustifolia*.

PULTENÆA WILLIAMSONIANA *J. H. Willis* spec. nov.

P. angustifolia H. B. Williamson var. *viscosa* H. B. Williamson in *Proc. roy. Soc. Vict.* new ser: *40*: 58 (1928).

Ut varietas *P. angustifoliae* Williamson olim publicata, sed a formis omnibus *P. mollis Lindl.* (*P. angustifoliam* includens) differt: foliis dispersioribus, late et rigide diffusis, glabris, subpungentibus; calyce resinoso-nitido, subglabro, in pedicello gracili (3–4 mm. longo); atque bracteolis brevibus subrotundis.

HOLOTYPE: Mt. Zero, northern extremity of Grampians, Victoria—*H. B. Williamson*, early Oct. 1927, *cum floribus* (MEL). *ISOTYPE* at NSW.

Also examined: Between Mts. Zero & Stapylton, where frequent on heathland around gully-heads ± 1½ miles east of Mt. Zero quarry—*J. H. Willis*, 27 July 1950, *cum fructibus* (MEL). The species was observed by R. V. Smith of Melbourne Herbarium, in Oct. 1945, growing along the track to Mt. William (personal communication).

Slender rigid shrub 1–2 cm. (3–6 feet) high, the young branches beset with short pale appressed hairs. Leaves glabrous or sparsely sprinkled with hairs, spreading at right angles to stem or even slightly reflexed (the petiole remaining ± erect) and never overlapping, 7–10 mm. long, 0·2–0·4 mm. wide, narrow-linear, involutely terete, rigidly acicular with short pungent mucro; stipules dark, setaceous, decurved, 2–3 mm. long. Flowers 2–4 together at ends of short lateral branchlets that may eventually grow out beyond flowers into leafy shoots; bracts stipule-like and inconspicuous at base of the hairy pedicels (3–4 mm. long). Calyx red-brown, resinous and shiny, campanulate, 5 mm. long, split to about $\frac{1}{3}$ into broad subacute lobes, sparsely hairy to almost glabrous except for a short marginal fringe of white cilia on the lobes; bracteoles attached at base of calyx, 2–2·5 mm. long, broadly ovate to almost orbicular, dark reddish-brown, glabrous and highly resinous (stuck to calyx-tube). Corolla to 10 mm. long; standard 8–10 mm. wide, with ± rotund lamina, clear yellow but suffused with red towards claw; wings and keel almost as long as standard, the former yellow, the latter dark purplish obtuse and ± dolabriform. Style filiform, ± 6 mm. long, pubescent at base. Pod 5–6 mm. long, broadly oblong with an oblique mucro (style-base, ± 1 mm.), reddish, pubescent. Seeds not observed.

In Williamson's herbarium are three other older collections that he had labelled " var. *viscosa* ", but they are closer to his *P. angustifolia* var. *angustifolia* (i.e., to *P. mollis*) and do not conform with the Mt. Zero population now recognized as *P. williamsoniana*. Actually the new species would seem to have much stronger affinities with *P. vrolandii* Maiden, of north-eastern granite ranges, than with any form of *P. mollis* from which it is markedly distinct in the rigidly spreading subpungent leaves, almost glabrous calyces on slender pedicels, and especially in the shorter almost *rotund bracteoles*. It is apparently endemic in the Grampians where it has quite a limited range.

The epithet honours the late Herbert Bennett Williamson (1860–1931), a botanist in the Victorian Education Department who for many years made the genus *Pultenœa* his particular study, who published many novelties (including 14 new species) thereunder and who first discovered *P. williamsoniana*.

BURTONIA SCABRA *R. Br.* in Ait.

During 1957 Mr. W. Cane of Maffra discovered in the vicinity of Gladstone Creek (Gippsland) five or six plants of *Burtonia scabra*, a handsome mauve-flowered leguminous shrub hitherto know only from sandy tracts in the south-west of Western Australia. The occurrence is astonishing and probably represents an accidental or deliberate introduction—perhaps by earlier miners from the W.A. goldfields. Two samples are in Melbourne Herbarium, viz:

> Dargo Road near Gladstone Creek, ± 7–8 miles N.N.E. of Briagolong—*W. Cane*, 21 Oct. 1957 (" flowers closing up at night-time "), also 19 Nov. 1957 (immature pods).

PLATYLOBIUM OBTUSANGULUM *Hook.*

var. SPINULOSUM *J. H. Willis* var. nov.

> a forma typica speciei manifeste differt: habitu erecto, folio rotundo eius marginibus a spinis tenuibus 3–7 munitis (spinis usitate supra medium folii emersis).

HOLOTYPE: On Airey's Inlet to Wensleydale road, about 2 miles north of Forestry Tower at Peter's Hill, northern fringe of Otway Range, S. Victoria—*Miss Marie Allender*, 12 Nov. 1961 (MEL). *ISOTYPES* at MEL & NSW.

Also examined: *Ibidem—Marie Allender*, 1 Nov. 1960 (MEL) & Dec. 1961 (NSW).

Differing from the widespread typical form of the species in its more erect habit and almost rotund leaves, the margins of which bear 3–7 slender spine-like teeth (usually toward the distal end). Except for a rather deeper purplish-brown colouration in the corolla, both flowers and fruits of the new variety are indistinguishable from those of the normal form of the species, which grows abundantly nearby; but no specimens intermediate in foliage have been observed. A population somewhat similar to the var. *spinulosum,* yet not identical, was collected by F. Mueller (Oct. 1851) " toward Glenelg River " in South Australia (specimen in MEL). *P. obtusangulum* var. *spinulosum* is apparently quite a rare plant, being known only by a few bushes in the type locality; the encroachment of leases for brown coal mining render its continued survival there uncertain.

HOVEA ROSMARINIFOLIA *A. Cunn.* in Field Geogr. Mem. N.S.W. 348 (1825).

H. longifolia R. Br. in Ait.f. forma *aspera* H. B. Williamson in Ewart *Flor. Vict.* 665 (1931).

With the exception of its relatively narrower leaves, typical *Hovea rosmarinifolia,* as occurring in the Dubbo–Tamworth region of New South Wales, appears to show no significant morphological difference from the populations in eastern Victoria referred by H. B. Williamson (*l.c.*) to a form of *H. longifolia.* Accordingly the name *H. rosmarinifolia* is now adopted for the slender Victorian mountain shrubs having asperous revolute leaves with prominently raised reticulations. Williamson (*l.c.*) ascribed the authorship of *H. longifolia* " var. *aspera* " to F. M. Reader, but there is no evidence that Reader ever published either a variety or a form under this epithet. In both editions (1923 and 1928) of the *Census of the Plants of Victoria* (Field Naturalists' Club of Victoria) *H. longifolia* var. *aspera* is attributed to Bentham; this also is erroneous.

HOVEA ROSMARINIFOLIA *A. Cunn.* in Field.
var. VILLOSA *J. H. Willis* var. nov.

a formis omnibus speciei recedit: calycibus, pedicellis atque foliorum faciebus inferioribus a villis densis obscuratis.

HOLOTYPE: Mt. Kaye, 13 miles N.N.E. of Cann River, far E. Victoria, on steep granitic slopes at ± 760 m. (2,500 feet) alt.—*J. H. Willis & N. A. Wakefield,* 16 Oct. 1948 (MEL). Part of *HOLOTYPE* at NSW.

Also examined: " Avon Country ", E. Victoria—*W. Cane,* June 1955 (MEL); Clarence River, N.S.W.—*J. F. Wilcox,* 1872 (MEL).

This apparently well-marked variant differs from all other conditions of *H. rosmarinifolia* in the dense, ± ferruginous, villous hair enveloping calyces, pedicels and undersides of leaves.

HOVEA LONGIFOLIA *R. Br.* in Ait.f.
var. MONTANA (*Hook.f.*) *J. H. Willis* comb. nov.

H. purpurea Sweet var. *montana* Hook.f. *Flor. Tasm.* 1: 93 (1856).

In Tasmania the distinctiveness of this variant is less marked than on the Australian alps, where it is sharply demarcated from all other forms of *H. longifolia* in its low stature (up to 30 cm.), small broad bluntish leaves (10–20 x 3–6 mm.) and very deep purple flowers that open soon after the winter snow has melted. It may form extensive societies on open alpine or subalpine heaths and woodlands at from 4,500 to 6,500 feet alt.; a white-flowered state, growing with the normal purple form, has been collected on Mt. Buffalo, Vic. (Nov. 1965), and Mt. Gingera, A.C.T. (Nov. 1962). F. Mueller had labelled a collection from the summit of Mt. Wellington, Vic., "*Hovea gelida*", but apparently he never published this name.

GALACTIA MEGALOPHYLLA (*F. Muell.*) *J. H. Willis* comb. nov.

Lamprolobium megalophyllum F. Muell. *Fragm. Phyt. Aust.* 9: 67 (1875).

F. Mueller (*l.c.*) described his *Lamprolobium megalophyllum* in the absence of pods, and cited "Galactia megalophylla F. M. coll." in synonymy immediately under the name, thereby indicating some uncertainty as to the correct generic placement of the species concerned. The chief difference between *Lamprolobium* Benth. (assigned to tribe Galegeæ) and *Galactia* R. Br. (tribe Phaseoleæ) appears to be in the *non-strophiolate* seeds of the latter, chiefly American genus, whereas the endemic *Lamprolobium* is defined as having seeds with a fleshy strophiole.

The writer was recently enabled to examine excellent fruiting material of *L. megalophyllum* from near Darwin, agreeing well with the type collection (Schultz n. 527) from the same area. The former collection had broad-linear, delicately pubescent, fawn-coloured pods 40 x 4–5 mm., sharply mucronate at apex, with thickened sutures and 4–6 transverse seeds. There was no vestige of a strophiole on the black flattened seeds (± 2 x 1·5 mm.) and, despite the erect shrubby habit of this plant (± 1·5 m. high), it ought surely be referred to *Galactia*, not to *Lamprolobium*. Species of *Galactia* are commonly scandent, with 3 leaflets, but in Brazil the sub-section Collæaria Benth. of section Collæa DC. contains several unifoliolate species, e.g., *G. benthamiana* Micheli which bears a striking resemblance to the Darwin population. The binary *Galactia megalophylla* does not seem to have been published, except in synonymy by Mueller and thereby illegitimate; so the transfer is now formally made in order to validate this name.

Known collections of *G. megalophylla* are:

Port Darwin, North Aust.—*Schultz* n. 527 (TYPE, in MEL); Shoal Bay Road near Darwin, N. Terr., "in open eucalypt forest", flowers pink—*H. S. McKee* n. 8392, 11 Feb. 1961 (CANB, MEL); Batchelor, N. Terr.—*G. Chippendale* n. 7742, Mar. 1961 (NT, CANB).

Rutaceae

BORONIA ANEMONIFOLIA *A. Cunn.* in *Field* Geogr. Mem. N.S.W. 330 (1825).

var. VARIABILIS (*Hook.*) *Benth.* Flor. aust. *1*: 321 (1863).

In *Vict. Nat.* 73: 194 (Mar. 1957) the writer recorded this taxon for Victoria, on the basis of an old (1870) collection in Melbourne Herbarium from Portarlington, and noted a report of its occurrence in the vicinity of Waratah Bay and Wilson's Promontory. This regional extension has now been confirmed by Mr. C. N. Rossiter of Hedley, who visited the north coast of Snake Island, Corner Inlet, on 14 June 1965. There, in light bracken along the N.W. edge of "The Gulf", he found a dozen bushes (to 4 feet high) of *Boronia anemonifolia* var. *variabilis* and donated specimens to Melbourne Herbarium. A few days later (21/6/1965), in Won Wron Forest toward Woodside on the mainland coast, he collected a curious trailing form of *B. anemonifolia* with very small hairy leaves and bright pink flowers. More recently an excellent collection of the variety has come to light in Melbourne Herbarium, made on nearby Sunday Island by Miss Coryl I. Skewes in Sept. 1952; duplicates of this are available for distribution. Also at Melbourne is a broad-lobed variant of the species from Twofold Bay, N.S.W. (*leg.* W. L. Morton); this seems best referred to the maritime variety *variabilis*, described originally from the northern coasts of Tasmania.

Rhamnaceæ

SPYRIDIUM SPATHULATUM (*F. Muell.*) *F. Muell. ex Benth.* Flor. aust. *1*: 430 (1863).

Until quite recently, the only record of *Spyridium spathulatum* for Victoria was a collection (Herb. MEL) made by St. Eloy D'Alton in "Shire of Lowan—from desert country" during 1889. This could have been from fringes of either the Big or Little Desert and, as no other Victorian occurrence had been noted throughout the past 75 years, the species was presumed to have become extinct in this State. Then, in August 1965, Mr. A. Grove–Jones (Manager of Glenalpine Pastoral Company) rediscovered *S. spathulatum* near the South Australian border about 14 miles north of Serviceton, along McCracken's Road in Toonambool Parish of the Big Desert. There were only about 20 individual plants, forming spindly bushes to 3 feet (1 m.) high, and it is much to be hoped that such an exceedingly rare colony will be safeguarded from any possibility of destruction or disturbance.

In the *Victorian Naturalist* 73: 166 (Feb. 1957) N. A. Wakefield described a new species, *S. nitidum*, assigning to it D'Alton's old Victorian specimens from the Shire of Lowan. His holotype (Herb. MEL) was a Kangaroo Island collection by F. G. Waterhouse, labelled "Sandy Scrub", which was also the type of *S. spathulatum* var. *microphyllum* Benth. (*l.c.*). Following are the chief points of difference between typical *S. spathulatum* (identical syntypes from "stony ranges near Mt. Lofty, and Kangaroo Island") and its variety *microphyllum* Benth. (also Kangaroo Id):

S. spathulatum var. *spathulatum*—Leaves broadly oblanceolate to ± spathulate, 10–20 x 4–7 mm., almost glabrous above (but microscopically asperulate), with an indumentum of appressed, silky, shining hairs beneath; flower-clusters pedunculate, 5–10 mm. wide, permanently invested with dark, broad, resinous bracts that conceal the flowers.

S. spathulatum var. *microphyllum*—Leaves much smaller, 5–10 x 1·5–2·5 mm., whitish and silky-hairy on *both* surfaces; flower-clusters virtually sessile, only 2–4 mm. wide, devoid of large dark bracts, and with minute flowers freely exposed.

There may be some justification for raising this latter taxon to specific rank (as *S. nitidum*). The Victorian population, however, is by no means identical; certainly its foliage is sericeous on both surfaces, as in *S. nitidum,* but the leaves are almost intermediate in size between those of *S. nitidum* and typical *S. spathulatum,* while the pedunculate inflorescences bear dark, broad, resinous bracts exactly comparable with those of *S. spathulatum* in the Mt. Lofty Range. It therefore seems preferable to treat the isolated Victorian occurence as a more hairy form of *S. spathulatum* (in the wider sense) than to ally it with the quite distinctive, smaller-leaved and -flowered taxon of Kangaroo Island (perhaps also on the Marble Range, Eyre Peninsula).

In Central Australia (Palm Valley and Finke River Gorge) is another very closely related plant, at present referred to *S. spathulatum.* Its leaves are finely velutinate above and strongly sericeous-hirsute beneath, the large bracteate flower-clusters being white-villous. Collections in Mebourne Herbarium are by E. Giles (1872) and H. Kempe (1880.).

SPYRIDIUM TRIDENTATUM (*Steud. in Lehm.*) *Benth.* Flor. aust. *1*: 427 (1893).

This species ranges widely in Western Australia between the Murchison and Salt Rivers, on the Darling Range and far into the Victoria Desert (at a point about 30 miles S.S.E. of Warburton Range Mission). The leaf, 4–7 mm. long, is hairy on both faces and variably trifid at the apex; when flattened out, it bears some resemblance to the claw-like sail of a New Guinea " lakatoi ". Examples from the Eremaean province have much more hairy (white-silky) and more strongly conduplicate leaves than those occurring nearer Perth. The species was considered endemic in the West until July 1951 when the late Mrs. E. Ramsay found it in the Hattah Lakes National Park, far N.W. Victoria, growing among mallee sand-hills against the old Calder Highway between mile posts 317 and 318, i.e., slightly N.W. of Lake Hattah. Her material of this apparently rare semishrub is now in Melbourne Herbarium, and no subsequent collection seems to have been made.

On 8 Nov. 1960, *S. tridentatum* was also located for the first time in South Australia, by Dr. R. L. Specht who found it near the centre of Eyre Peninsula, ± 10 miles north of Lock (on a Flora and Fauna Reserve in the Hundred of Hambidge). His voucher specimens (n.2405) are at State Herbaria AD and MEL, and the record was published by Hj. Eichler in *Suppl. to J. M. Black's Flor. S. Aust.* 217 (1965).

Malvaceæ

SIDA AMMOPHILA *F. Muell. ex J. H. Willis* spec. nov.

S. trichopodam F. Muell. et *S. fibuliferam* Lindl. proxime appropinquans. A priore differt: foliis densius stellato-pilosis venas laterales conspicuiores subter exhibentibus, pedunculis brevioribus (5–15 mm.) calycis-lobis omnino acutis, et praecipue fructus nuculis glabris multo minus curvatis atque in faciebus planis duabus multo profundius faveolatis. A *S. fibulifera* recedit: foliis multo angustioribus (attenuate-oblongis vel linearibus), stipulis setaceis brevioribus (2–3 mm.), calycis-lobis acutis, pedunculis unifloris (raro bifloris) et fructus nuculis glabris quarum faciei planae duae favellam cristatam etiam dentatam exhibet.

HOLOTYPE: " In arena mobili riparum fluvii Murray inter Morundam & versuram orientalem ", South Aust.—*F. Mueller,* 1 Feb. 1851 (MEL).

Also examined (all in MEL):

S.A.: Murray River—*F. Mueller;* Nilpena H. S. (10 miles W. of Warrina Ry. Stn.)—*R. Helms,* Elder Exped., 3 May 1891; North of Lake Eyre—Hon. *Newham,* June 1887.

VIC.: Sand-banks along S.W. side of Lake Hattah (Nat. Park), far N.W. Mallee—*J. H. Willis & A. C. Beauglehole,* 15 Oct. 1960; *ibidem*—*N. H. E. McDonald,* 10 Jan. 1966 (an excellent collection—also in NSW).

N.S.W.: Darling River—*J. Dallachy & T. H. Goodwin,* Nov. 1858; Lower Darling River near Wentworth—Mrs. Helena Forde, 1865; " Nangavera to Yellowinchee " (i.e. immediately north of Mt. Koonenberry), far N.W. region—*H. Beckler,* Vict. Explor. Exped., 29 Dec. 1860; " Duroodoo " (i.e. Torowoto Swamp ± 44 miles E.S.E. of Milparinka), far N.W. region—*H. Beckler,* Vict. Explor. Exped., 27 Dec. 1860.

Q'LAND: Bulloo River, S.W. Region—*R. S. Moore,* 1878.

CENT. AUST.: Great Stony Desert—*J. M. Béchervaise,* 25 Aug. 1947; Tempe Downs—R. F. Thornton, 1891.

Low but upright semishrub 15–45 cm. tall. *Leaves* narrowly oblong to linear, 1–4 cm. x 2–6 mm., on petioles 3–6 mm. long, rather densely stellate-hairy on both surfaces which are sage-grey, the lateral veins conspicuous beneath, the almost parallel margins broken into blunt forward-pointing teeth; stipules subulate, caducous, 2–3 mm. long, stellate-hairy. *Peduncles* 5–15 mm. long, stellate-hairy throughout, rarely 2-flowered. *Calyx* 3–4 mm. long, the lobes ovate to broadly lanceolate, acute, about as long as tube, densely stellate. *Petals* yellow, broad and rounded, only slightly longer than calyx, villous on margins of short claws; gynandrophore 1·5–2 mm. long. *Fruitlets*

± 3 mm. long, glabrous or almost so, reticulately rugose to subtuberculate on the back which is ± semicircular and deeply grooved at apex; the 2 flat faces honey-combed, with walls of reticulum ± cristate or broken into separate teeth.

Sida ammophila belongs to a group of narrow-leaved, closely related species that were merged under *S. corrugata* Lindl. by Bentham in his *Flor. aust. 1*: 192–93 (1863). In Melbourne Herbarium, some specimens of it had also been filed under *S. trichopoda, S. virgata* and even *S. petrophila* to which it bears little resemblance. F. Mueller had written "*S. ammophila*" on the labels accompanying several early collections, but apparently never legitimized this name by any published description. As his suggested binomial (meaning "sand-lover") is apt, it has now been taken up—typified by the first known collection, from east of the Murray River near Moorundie, S.A.

The new species has strong affinities with both *S. trichopoda* (type from Kanyaka, southern Flinders Range, S.A.) and *S. fibulifera* (type from central Lachlan River region, N.S.W.). From the former it differs in having more densely stellate-hairy leaves with lateral veins conspicuous on the under side, shorter peduncles (5–15 mm.), quite acute calyx-lobes, and especially in the glabrous, coarsely rugose fruitlets which are much less curved on the back and much more deeply honeycombed on the two flat inner faces. From *S. fibulifera* it departs in the consistently narrower leaves (attenuate-oblong to linear), shorter setaceous stipules (2–3 mm.), acute calyx-lobes, usually single-flowered peduncles and glabrous fruitlets in which the deep lateral reticulations (or favellae) are cristate or even broken into separate teeth. *S. fibulifera*, with characteristic long-persistent pin-like stipules, has fruitlets very similar to those of *S. ammophila* in size, shape and sculpture; but they are minutely pubescent with mostly simple hairs, and the favellae of the flattened faces are neither crested nor otherwise broken.

The ten localities, represented so far by specimens in Melbourne Herbarium, show that *S. ammophila* ranges widely through arid inland Australia, occurring in at least four States and southern parts of the Northern Territory. It is doubtless much more widespread than these few collections would indicate, and is often co-extensive with one or other of its congeners.

Myrtaceæ

EUCALYPTUS BLAKELYI *Maiden* Crit. Rev. Eucal. 4: 43 (1917).

Described originally from the Pilliga Scrub near Coonabarabran, *Eucalyptus blakelyi* occurs extensively, often in association with *E. melliodora*, on the Western Slopes and Plains regions of New South Wales. Occurrences are also frequent in the A.C.T. and on the Monaro Tableland where it reaches a southern limit near the junction of the Snowy and Delegete Rivers, only 10–12 miles from the Victorian border. In his *Key to the Eucalypts* 131 (1934) W. F. Blakely does not list a Victorian locality for *E. blakelyi;* but he does cite Beechworth under "Forest Red Gum" (p. 130), as did A. J. Ewart in *Flor. Vict.* 821 (1931). There is now no doubt that the old Beechworth district record applies to *E. blakelyi,* and not to *E. tereticornis* which is restricted in Victoria to the near-coastal plains of East Gippsland, between the lower Thomson River and Orbost. The more readily observable differences between these very closely related taxa are dimensional, thus:

E. *tereticornis*—Adult leaves usually 7–12 times as long as broad; operculum 2–3 times as long as calyx-tube; fruit usually 7–9 mm. wide.

E. *blakelyi*—Adult leaves usually 5–7 times as long as broad; operculum usually only up to one and a half times as long as calyx-tube; fruit usually 5–7 mm. wide.

Apparently A. B. Costin, in *Study of the Ecosystems of the Monaro Region* of N.S.W. 320 (1954), was the first to note the definite extension of *E. blakelyi* into Victoria, by his remark "The *E. melliodora*—*E. blakelyi* alliance occurs on a smaller scale on the south coast of New South Wales, and in Victoria". He refers to R. G. Downes (C.S.I.R.O. *Bulletin* 243, p. 41. 1949), who had mentioned *E. melliodora* and *E. tereticornis* as the principal tree species of savannah woodland between Koonda and Upotipotpon (north of Violet Town). Actually, *E. blakelyi* is very widespread in north-eastern Victoria, over a lineal distance of at least 120 miles—between Violet Town and the Warby Range, thence on both sides of the Hume Highway to Chiltern and Wodonga districts, along the Murray Valley (and ancillary valleys from the south) to as far upstream as the Walwa district. Specimens in Melbourne Herbarium are from on and around the Warby Range, Killawarra, Eldorado–Springhurst Forest, Beechworth district, Yackandandah, 10 miles west of Burrowye and the vicinity of Walwa, with an isolated collection from the Snowy River Gorge near Butcher's Ridge—doubtless a result of seed washed by flood from Monaro country only a few miles across the N.S.W. border.

Mr. L. A. S. Johnson, of Sydney Herbarium, has reported to the writer (*in lit.* 18/2/1965) that around the Chiltern–Wodonga region *E. blakelyi* "appears to be largely hybridised with *E. camaldulensis,* so that specimens from this area do not usually show typical '*blakelyi*' fruit- or bud-shapes". Miss P. Carolan (Geology Department, University of Melbourne) has noted an isolated western occurrence of *E. blakelyi* on granitic hills in the Inglewood district.

EUCALYPTUS OXYPOMA *Blakely* Key Eucal. 244 (1934).

The only localities quoted with the original diagnosis were: near the 37-mile post on Deniliquin–Barham road, Griffith, and Nyngan, the new taxon being allied with *E. microtheca.* No mention was made of a possible hybrid origin. Buds were described as "tip-cat-shaped", 5–6 x 3 mm., the operculum acutely conical and a long as (or sometimes longer than) the calyx-tube; while the slenderly pedicellate fruits were thin, campanulate, 5 x 4 mm., with broadly deltoid subexserted valves.

In October 1952 Mr. A. J. Gray, then in charge of Wimmera Forest Nursery at Wail, Vic., submitted to the writer specimens from a tree that was suspected to be a natural hybrid between *E. camaldulensis* and *E. largiflorens;* it was growing on the Western Highway against the Wimmera River bridge between Dimboola and Lochiel. A sample sent to L. D. Pryor, then of the Parks and Gardens Section, Canberra, evoked the opinion (*in lit.* 28/11/1952) that the material represented *E. oxypoma*—apparently a " southern extreme form of *E. coolabah* " (now generally fused with *E. microtheca*). Quite recently in *Leaflet* n. 92 of the Forestry and Timber Bureau, entitled " Taxonomy and Nomenclature of Eucalypts ", p. 18 (1965), R. D. Johnston and Rosemary Marryatt list *E. oxypoma* as a probable hybrid involving *E. camaldulensis* and *E. largiflorens.*

In the *Riverlander* for July 1961 (pp. 6–7 & 27) G. B. Eggleton discussed in detail the occurrence of a possible hybrid between the same two species that he had found in Kulkyne National Forest during 1954—" on floodgum country that lies between Lake Hattah and Mournpool ". Seven mature trees were noted, and seedling progeny was later raised from the largest of them. Finally, in May 1962, V. L. Lowe of Mystic Park forwarded to Melbourne Herbarium specimens of two unusual trees located near the centre of Kerang Marshes, about 10 miles N.W. of Kerang, Vic. His material was identical with Gray's Wimmera River samples, and doubtless also referable to *E. oxypoma.*

Thus, this presumptive hybrid occurs in three widely separated localities of north-western Victoria, sensibly on the points of an equilateral triangle and each ± 120 miles apart from the other. Only very few individual trees have been found at each place, and then always in association with co-dominant *E. camaldulensis* (River Red Gum) and *E. largiflorens* (Black Box). Reports are apparently lacking for any occurrence along the Murray River in South Australia, where both parent species are also present. Natural interbreeding between a eucalypt of the anthereal section *Macrantheræ* and one in the *Porantheroideæ* must surely be a very rare and highly interesting occurrence.

EUCALYPTUS TENUIRAMIS *Miq.* in Ned. kruidk. Arch. *4:* 128 (1856).

E. tasmanica Blakely *Key Eucal.* 214 (1934);
E. risdonii Hook. f. var. *elata* Benth. *Flor. aust.* 3: 203 (1866).

Both Bentham (*l.c.* p. 202) and Maiden in his *Crit. Rev. Eucal. 1*: 151 (1905) treated *Eucalyptus tenuiramis* as a synonym of *E. amygdalina* Labill. Blakely (*l.c.* p. 212) resurrected the name, 78 years after publication of Miquel's original diagnosis and, apparently without consulting the latter, applied it to a non-glaucous assemblage extending from the extreme south of Tasmania (Recherche Bay) to the eastern islands of Bass Strait; occurrences on Flinders and Deal Islands doubtless influenced his choice of the vernacular " Island Peppermint ". In Winifred M. Curtis's *Student's Flora of Tasmania* pt. *1*: 221 (1956), *E. tenuiramis* is again relegated to *E. amygdalina*, but as a hybrid *E. amygdalina* X *risdonii* with the comment " A broad-leaved non-glaucous segregate has been named *E. tenuiramis* Miq.". Johnston & Marryatt's " Taxonomy and Nomenclature of Eucalypts " in *Leaflet* 92 of the Forestry and Timber Bureau, p. 22 (1965) gives *E. tenuiramis* as a " probable hybrid *E. amygdalina* X *E. risdonii* ".

Miquel (*l.c.*) had made his description from fragments lacking fruit; but he did write " *Folia - - - - nunc glauco-pruinosa* " and " *calycis tubo - - - - striolato pruinoso* "; which hardly accords with Curtis's concept of a " non-glaucous segregate ", nor do these characters fit Blakely's insular tree with obscurely veined glossy leaves and shining buds. The present writer can see no reason why the broad-leaved peppermint so frequent on Flinders Island should not be included under *E. simmondsii* Maiden (listed only for western parts of Tasmania)—if indeed the latter is really separable from *E. amygdalina* at the specific level. Miquel's words, as far as they go, certainly suggest something akin to *E. tasmanica* Blakely (*l.c.*) which was based on Bentham's variety *elata* of *E. risdonii* from Lake St. Clair. Representative samples of the glaucous tree, currently accepted as *E. tasmanica*, from southern Tasmania were therefore sent to the Herbarium at the State University of Utrecht (Netherlands) for careful comparison with type *E. tenuiramis*—labelled " Van Diemensland. Stuart n. 11 & 16 " and doubtless from the vicinity of Southport. Dr. E. A. Mennega subsequently replied (9/7/1965):

> " As far as I can judge, the material you sent us resembles very well the (quite fragmentary) type-material of Miquel. - - - - As for - - - the appearance of the stem and buds, I can't see any difference between your material and that of *E. tenuiramis* ".

He also kindly forwarded photographs of the type, including enlargements of leaf-venation and mature buds. Subsequently, two sheets of what is almost certainly duplicate type material of *E. tenuiramis* were located in Melbourne Herbarium, *viz.* C. Stuart's Nos. 11 & 16 which came through the great herbarium of Sonder; flowers are present on each specimen which is much more adequate than the actual type at Utrecht.

The writer entertains no doubt whatever that the taxon described by Blakely as *E. tasmanica* is identical with Miquel's *E. tenuiramis*, and that the former name should be placed in synonymy. It is possible that this variably glaucous population first arose through hybridism between *E. amygdalina* and *E. risdonii;* but, if now accepted as a distinct species, then the name *E. tenuiramis* must take precedence.

LEPTOSPERMUM GLAUCESCENS *S. Schauer* in Linnaea *15*: 421 (1841).

L. sericeum sensu W. M. Curtis *Student's Flor. Tasm. 1*: 198 (1956), *non* Labill. *Nov. Holl. Plant. Specim. 2*: 9, t.147 (1806);

L. flavescens sensu L. Rodway *Tasm. Flor.* 53 (1903), *non* Sm. in *Trans. Linn. Soc.* 3: 262 (1797);

L. myrtifolium sensu L. Rodway *l.c.* 53 (1903) atque Benth. pro parte *Flor. aust.* 3: 108 (1866), *non strict.* Sieber ex DC. *Prodr. 3*: 228 (1828);

Eriostemon? trinerve Hook. *J. Bot.* (*Lond.*) *1*: 254 (1834), non *L. trinerve* DC. *Prodr.* 3: 227 (1828).

NEOTYPE (cum floribus): Western foot of Strzelecki Peaks, S.W. Flinders Island, Bass Strait, Tasmania, virgate shrubs to 3 m. (10 feet) high, dominating damp sandy heathland—*J. H. Willis*, 10 Apr. 1954 (MEL). *ISO*- and *PARA-NEOTYPES* at MEL, NSW, HO, K.

It is unfortunate that one of the three commonest species of tea-tree in Tasmania should have been misidentified and erroneously named for the past 110 years. In the latest taxonomic treatment, by Dr. Winifred Curtis (*l.c.*, 1956), this plant is referred to *Leptospermum sericeum* Labill. Labillardière ascribed his species to " capite Van–Diemen ", and the printed description (*l.c.*) does agree tolerably well with features of a widespread, often coastal Tasmanian shrub; but the plate (t. 147) by Poiteau portrays an entity having much larger flowers on distinct pedicels.

The fact is well attested that, in the two volumes of his *Novæ-Hollandiæ Plantarum Specimen,* Labillardière sometimes made the mistake of writing " capite Van–Diemen " instead of " terra Van–Leuwin " and *vice versa.* A notable example concerns *Eucalyptus ovata* (t. 153) which was attributed to " terra Van–Leuwin "; and, although in 1821 this error was corrected to " Terre de Diemen " by Labillardière himself on a sheet at the Paris Herbarium, the name remained a stumbling block for the next century, and its application was unknown even to G. Bentham. As long ago as 1844, doubt was expressed by J. C. Schauer, in *Plantæ Preissianæ 1*: 121, that the locality quoted with the original description of *Leptospermum sericeum* was accurate. Following is a literal translation of Schauer's Latin:

> " I contend [that it was] collected by Labillardière more certainly in Van Leuwin's Land, and not in Van Diemen's island."

In Melbourne Herbarium is a probable part of the type collection of *L. sericeum* (ex Herb. Mus. Brit.); it is unfortunately barren, but the foliage accords with Labillardière's illustration. Also in perfect agreement is a specimen in early fruit that the present writer collected on 10 Nov. 1950 at Sandy Hook Island, Recherche Archipelago (W.A.)—the likely type region. In October 1962 he received excellent flowering material of the same handsome, pink-flowered plant from granite rocks at nearby Cape le Grand (*leg.* C. A. Gardner, 2/9/1962) and submitted a portion of this to Florence Herbarium for critical comparison with Labillardière's actual type in " Herb. Webbianum ". Again, the identity was confirmed.

There is no doubt whatever that *L. sericeum* is a coastal endemic of Western Australia, restricted to granite cliffs and islands, chiefly in the vicinity of Esperance Bay, and that the much taller Tasmanian plant, so-called, is quite a different species—contrary to the writer's misleading remark in *Muelleria 1*: 98 (1959). Bentham, *Flor. aust. 3*: 117 (1866), without having seen flowers of either, confused and synonymized *L. sericeum* Labill. with *Kunzea sericea* Turcz.—a divaricate, long-staminate shrub having rather similar foliage, but not occurring within 80 miles of the sea (e.g. among granite slabs of the Wongan Hills). This misconception was finally rectified and *L. sericeum* restored as a distinct W.A. species by C. A. Gardner in *J. roy. Soc. W. Aust. 47*: 61 (1964). It is of interest to note that Labillardière *did* also collect specimens of the Tasmanian species mistakenly referred by Curtis to *L. sericeum*. Three of his examples from " Herb. Webbianum " are at Melbourne and were labelled " *Leptospermum stellatum* ", but *L. stellatum* Cav. is now treated as synonymous with *L. attenuatum* Sm.—a small paper-barked tree that ranges up the mainland coast from far E. Victoria to S.E. Queensland.

L. Rodway's descriptions (*l.c.*, 1903) under *Leptospermum flavescens* Sm. and *L. myrtifolium* Sieb. both apply to the same misconstrued Tasmanian tea-tree and not to those two species, which are confined to the Australian mainland. His *L. flavescens* var. *nitidum*, however, is *L. nitidum* Hook.f. as now recognized. Bentham (*l.c.*, 1866) had included the endemic Tasmanian plant in a rather wide circumscription of *L. myrtifolium*—strictly a small spindly shrub of swampy tracts in mountainous terrain of eastern Victoria and New South Wales.

The first published account of material actually from Tasmania would seem to have been W. J. Hooker's diagnosis of *Eriostemon trinerve* (*l.c.*, 1834), type of which was located in the covers of *L. myrtifolium* at Kew Herbarium by Dr. R. Melville in Oct. 1962. Two mounted sprays (about 5 ins. long) are vegetative only and were collected by R. W. Lawrence (n. 91) in 1831, but no locality data are provided. Hooker was uncertain of the genus, although shape and texture of leaves and their prominent oil-glands reminded him of *Eriostemon obcordatum* A. Cunn. ex Hook. [= *E. verrucosus* A. Rich.]. A new combination, " *L. trinerve* ", based upon this type, is precluded by the existence of the earlier homonym *L. trinerve* DC. (*l.c.*, 1828) which refers to a Port Jackson species—probably *L. lanigerum*.

In 1841 S. Schauer (*l.c.*) gave a detailed description in German of a new *Leptospermum* (4 feet high) growing at Breslau Botanic Garden; the plant had been donated by Berlin Botanic Garden where it was raised from seed obtained somewhere in Van Diemens Land.

He called it *L. glaucescens*, from the blue-green colour of the leaves which were conspicuously gland-dotted, broadish and quite glabrous at maturity. There is a note under J. D. Hooker's original description of *L. nitidum* in *Flora Tasmaniae 1*: 140 (1856):

> "This is possibly Schauer's *L. glaucescens* (see *L. myrtifolium*), but the leaves are not at all glaucous, and the calyx-lobes are not persistent."

He then synonymizes *L. glaucescens* Schauer—with a query—under *L. myrtifolium*, quoting collections by Fraser, Lawrence and Gunn. In *Flor. aust. 3*: 107 (1866) Bentham cites *L. glaucescens* as a synonym of his *L. lanigerum* var. *e*—"Flowers smaller - - - - the commonest form in Tasmania, Victoria and South Australia". It seems obvious that neither Hooker nor Bentham had seen authenticated specimens of Schauer's *L. glaucescens*.

Extensive inquiries recently addressed to the principal herbaria at Berlin, Munich, Geneva and London, have failed to discover any type specimens of *L. glaucescens*. As Schauer based his description upon a living plant under cultivation, it is possible that no herbarium sheet was ever prepared at the time. The writer believes *L. glaucescens* to be the legitimate name for this endemic Tasmanian tea-tree that has had such a chequered nomenclatural history; it could not very well apply to any other *Leptospermum* in the island State, and Schauer's description does not conflict at any point with the characteristics as set out by W. M. Curtis (*l.c.*) under "L. sericeum". The apparent non-existence of a type specimen calls for typification of the binomial, *L. glaucescens*, by means of an adequate Tasmanian collection, and this has now been done (see above).

MELALEUCA NEGLECTA *Ewart & B. Rees* in Proc. roy. Soc. Vict. new ser. *23*: 60, t. 13, fig. 1, 2, 4 (1910).

M. oraria J. M. Black in *Trans. roy. Soc. S. Aust. 69*: 309 (1945).

The original description of *Melaleuca oraria* (*l.c.*) was published 35 years after that of *M. neglecta*, and the former entity assumed to be endemic along the southern coasts of South Australia—between Port Lincoln and Rivoli Bay, with an inland occurrence at Yallum near Penola (far S.E.). No type was designated as such, and, although comparisons were drawn with *M. brevifolia* Turcz. (of West. Aust.), no mention was made of any relationship to *M. neglecta* of western Victoria. The present writer finds that the type collection of *M. neglecta* (Dimboola district, *leg.* St. Eloy D'Alton, Dec. 1909) is a perfect match for representative material of Black's *M. oraria* from Meningie and Robe, S. Aust., and is therefore convinced that the name *M. oraria* should be reduced to synonymy under *M. neglecta*.

A completely false impression emerges from the descriptions of *M. oraria* and *M. neglecta* in J. M. Black's *Flora of South Australia* ed. 2: 611–12, fig. 814–15 (1952). For instance, the distinguishing key character for *M. neglecta* on page 607 runs: "Leaves 8–10 mm.

long, slightly glandular", whereas its type (in MEL) consists of prominently glandular-tuberculate leaves only 4–6 mm. long—precisely as in *M. oraria.* The figures (814 and 815) on page 611 show a crenulate petal for *M. oraria* (not "denticulate" as in the text on p. 612, line 1), but a regularly ciliolate petal for *M. neglecta.* In actual fact, the petals in both vary from almost entire to sparsely and irregularly serrate (or erose)—*never* ciliolate—and they are about 1·5 mm. long and broad. The population in Torrens Gorge (Black's only locality for *M. neglecta* in South Australia) is atypical in having longer (5–12 mm.) leaves "rarely dotted with glands", and larger petals (2 mm.); it may not even be referable to *M. neglecta.* It is possible that, when the closely related W. A. species *M. brevifolia* Turcz. is better known, separation of *M. neglecta* at the specific level may prove to be unwarranted; for the present, retention of the latter name for eastern populations seems desirable.

BAECKEA UTILIS *F. Muell. ex Miq.* in Ned. kruidk. Arch. 4: 150 (1856).

var. LATIFOLIA *(Benth.) J. H. Willis* comb. nov.

B. gunniana Schauer var. *latifolia* Benth. *Flor. aust.* 3: 79 (1866).

Baeckea gunniana, of montane to alpine habitats in south-eastern Australia (including Tasmania), has been generally regarded as a rather polymorphic species, the populations of which vary in growth-habit, leaf-shape, size of flowers and number of stamens. It is, however, possible to divide collections into two circumscribed categories having the following characteristics:

1. Leaves often concave above, convex beneath but without obvious keel, 2–4 mm. long; flowers on pedicels shorter than calyx; petals less than twice as long as calyx-lobes; stamens usually 5, sometimes up to 7.
2. Leaves always ± flat above, with distinct keel or rib on the under side, 4–10 mm. long; flowers on pedicels as long as or longer than calyx; petals twice the length of calyx-lobes or longer; stamens 7–10, often 8.

The first category is undoubtedly conspecific with *B. gunniana* Schauer as described originally in W. G. Walpers' *Repertorium Botanices Systematicae 2*: 921 (1843), from type material collected on Mt. Wellington, Tas., by R. C. Gunn (n. 306, 7 Jan. 1841). A duplicate of the type number is in Melbourne Herbarium. Plants from Tasmanian mountain tops are commonly prostrate and differ further from mainland examples in having the leaves *flattened* (not distinctly concave) on their upper-surfaces.

The second category agrees in all essential details with the type of *B. utilis* F. Muell. ex Miq. (*l.c.*), a duplicate of which is also in Melbourne—from Buffalo Range, Vic. (*leg.* F. Mueller, Feb.–Mar. 1853). The leaf-length of 1⅓ lines (i.e. 2·5–3 mm.) given in the original diagnosis may be applicable to *B. gunniana,* but hardly to *B. utilis* where it is 2–4 lines. Present records would indicate an absence of this taxon from Tasmania. In *Fragmenta Phytographiae Australiae 4*: 66 (Feb. 1864) Mueller reduced his own species to synonymy under *B. gunniana*. Bentham (*l.c.*) did likewise, and this concept has been maintained by all Australian botanists during the past century. The writer is indebted to Dr. Nancy T. Burbidge, Division of Plant Industry, C.S.I.R.O. at Canberra, for pointing out the differences between these two distinct populations of *Baeckea* in the A.C.T. and for suggesting the probability that one of them may be referable to Mueller's long-submerged *B. utilis*. He now agrees that separation at the specific level is desirable.

Smaller-leaved and -flowered *B. gunniana* appears to occur only around or within sphagnum bogs at the higher altitudes (e.g. Mts. Baw Baw, Wellington, Buller and Buffalo, Bogong High Plains and the Cobboras), whereas *B. utilis* extends from the moss-beds into subalpine woodlands or mountain forest, and has been found at much lower altitudes along Maramingo Creek in far East Gippsland (less than 400 feet above sea-level). The two species overlap on the Baw Baws and the Buffalo Plateau. In the Lake Mountain–Baw Baw region is an endemic variant of *B. utilis*, having much larger obovate to elliptic leaves 2–6 mm. wide (cf. 1–1·5 mm. in the typical form). This was published by Bentham (*l.c.*) as *B. gunniana* var. *latifolia*; so the varietal epithet now needs to be associated with its correct specific name—a transfer effected above.

Epacridaceæ

In the course of revisionary studies on Malesian representatives of *Epacridaceæ*, H. Sleumer has remodelled the existing classification of Australian genera in the tribe *Styphelieæ*. His scheme, following closely that proposed by F. Mueller in *Fragm. Phyt. Aust.* 6: 50–57 (1867), is set out convincingly in *Blumea* 12: 146–169 (1963), and the relevant portions are also adopted in his monograph for *Flora Malesiana* 6: 422–444 (1964). The Victorian genera *Monotoca*, *Brachyloma*, *Acrotriche*, *Pentachondra*, *Trochocarpa* and *Choristemon* retain their status; *Leucopogon*, *Cyathodes* and *Lissanthe* are reduced to three subgenera of *Styphelia*, while *Melichrus* and *Astroloma* are merged with *Styphelia* (*sens. strict.*) in the subgenus *Styphelia*. This view has much to commend it, and makes for a more satisfactory delimitation of genera. Its acceptance would involve relatively few changes in nomenclature, since most species in the large subgenus *Leucopogon* have previously had binomials under *Styphelia* (*sens. lat.*). As far as Victoria is concerned, the following seven new combinations are required:

STYPHELIA CLELANDII (*E. Cheel*) *J. H. Willis* comb. nov.

Leucopogon clelandii E. Cheel in *Trans. roy. Soc. S. Aust.* 39: 98 (1915).

S. GELIDA (*F. Muell. ex Benth.*) *J. H. Willis* comb. nov.

Leucopogon lanceolatus (Sm.) R. Br. var. *gelidus* F. Muell. ex Benth. *Flor. aust.* 4: 186 (1868);

L. gelidus (F. Muell. ex Benth.) N. A. Wakefield in *Vict. Nat.* 73: 59 (1956).

S. MUCRONATA (*Hook.f.*) *J. H. Willis* comb. nov.

Pentachondra mucronata Hook. f. in Hook. *Lond. J. Bot.* 6: 270 (1847); *Leucopogon fraseri* quoad Benth. *Flor. aust.* 4: 218 (1868) atque auctt. var., *non* A. Cunn. in *Ann. nat. Hist.* 2: 47 (1838)—N.Z. endem.

S. NEUROPHYLLA (*F. Muell.*) *J. H. Willis* comb. nov.

Leucopogon neurophyllus F. Muell. *Fragm. Phyt. Aust.* 1: 37 (1858).

S. PILIBUNDA (*A. Cunn ex DC*) *J. H. Willis* comb. nov.

Leucopogon pilibundus A. Cunn. ex DC. *Prodr.* 7: 746 (1839).

S. PILIFERA (*N. A. Wakefield*) *J. H. Willis* comb. nov.

Leucopogon piliferus N. A. Wakefield in *Vict. Nat.* 73: 58 (1956).

S. RIPARIA (*N. A. Wakefield*) *J. H. Willis* comb. nov.

Leucopogon riparius N. A. Wakefield in *Vict. Nat.* 73: 59 (1956).

MONOTOCA ROTUNDIFOLIA *J. H. Willis* spec. nov.

unica ob folia rotunda (marginibus ± recurvis) atque petala intus manifeste papillosa.

Fruticulus prostratus ramis tenuibus sparsim pubescentibus. *Foliorum lamina* ± rotunda (3–5 mm. longa), tamen ob margines saepe arcte recurvos (paene revolutos) ephippiformem esse videtur, petiolo manifesto purpurascenti (1–1·5 mm. longo) praedita, supra minute scabrida, infra albida atque a venulis 15–25 flabellate-divaricatis prominenter lineata, distanter ciliolata, ad apicem obtusa aut mucrone perbrevi indurato. *Flores* 5-partiti, in axillis superis solitarii, pedicellis robustis pubescentibus praediti; *calyx* pallide viridis, ± 1 mm. longus, eius lobi arcte imbricati perlate ovati obtusi albido-ciliati, ad basin a bracteis duabus similibus (sed brevioribus—0·7 mm.) subtendentes; *corolla* pallide ochracea, ± 2 mm. longa, eius tubus sepala non excedens, lobis 5 valvatis ovato-lanceolatis vel fusiformibus, ± 1·5 mm. longis, extus glabris, intus breviter sed prominenter papillosis, primum incurvatis deinde pigre expandentibus, marginibus anguste incurvis atque apicibus obtusis induratisque. *Antheræ* ochraceae subsessiles, corollae tubi apicem versus affixae, late ellipsoideae, comparate magnae (0·7–1 mm. longae), per totum fertiles. *Stylus* glaber brevis crassusque, profunde 5-angulatus, ± 0·6 mm. longus (summitate stigmatica conica ± 0·1 mm. alta); *ovarium* uniloculare, oblate-globoideum, ± 0·4 mm. altum, disci squamulis 5 (quaque 0·3 mm. longa) viridibus ovatis amplexum. *Fructus* ignotus.

HOLOTYPE: Brumby Point, N.E. portion of Nunniong Plateau, East Gippsland, Victoria, in montane mallee heath overlooking Reedy River gorge, at ± 1,250 m. (4,100 feet) alt.—*K. C. Rogers*, 10 Mar. 1964 (MEL). *ISOTYPES* at MEL, NSW, AD, CANB, K.

PARATYPES: *Ibidem*—*K. C. Rogers*, 30 Jan. 1964 (MEL).

Small prostrate or ascending semi-shrub with slender sparsely pubescent branches. *Leaf-blades* 3–5 mm. long and broad, rotund but often appearing saddle-shaped through the tightly recurved

(almost revolute) margins, furnished with distinct purplish petioles 1–1·5 mm. long, minutely scabrid above, white beneath where conspicuously lined by 15–25 flabellately spreading veins, shortly ciliate toward apex which is blunt or with very short indurated mucro. *Flowers* pentamerous, solitary in upper axils, on stout pubescent pedicels ± 0·5 mm. long; *calyx* pale green, ± 1 mm. long, the closely imbricate lobes very broadly ovate, blunt and white-ciliate, subtended at base by a pair of similar but shorter bracts (0·7 mm.); *corolla* creamy yellow, ± 2 mm. long, its tube not exceeding calyx; the 5 corolla-lobes valvate, ovate-lanceolate to fusiform, ± 1·5 mm. long, glabrous externally, shortly but prominently papillose on inner surfaces, at first inarched and tardily spreading at anthesis, margins narrowly incurved, apex blunt and indurated. *Anthers* yellow, almost sessile toward apex of corolla-tube, broadly ellipsoid and comparatively very large (0·7–1·1 mm. long), fertile throughout; *style* glabrous, short and thick, sharply 5-angled, ± 0·6 mm. long (with conical stigmatic end ± 0·1 mm. high); ovary 1-locular, depressed globoid, ± 0·4 mm. high, embraced by 5 green ovate scales of the disk (each 0·3 mm. long); fruit unknown.

The new species appears to have no close congeners, being unique in its orbicular flabellately veined leaves and conspicuously papillose inner surfaces of the petals. Its range is extremely localized, and no occurrence is yet known beyond the type area on the Nunniong Plateau. Until the disastrous fire in February 1965, it was locally abundant and even a dominant ground-cover, sprawling over several acres of open mountain heath that alternate curiously with strips of mallee eucalypts (*Eucalyptus kybeanensis, E. glaucescens* & *E. pauciflora* forma) along a barren slaty ridge between the Reedy and Little Reedy Rivers (western tributaries of the upper Buchan River); associated shrubs were *Banksia canei* sp. nov., *Oxylobium alpestre* and *Bossiœa foliosa*. The discoverer of *Monotoca rotundifolia*, Mr. Keith C. Rogers of Wulgulmerang, revisited the locality in October and reported (*in lit.* 16/12/1965):

> "I noticed a few plants of the new *Monotoca* where the fire had evidently burnt at night. *Banksia* seedlings are in abundance everywhere."

Apocynaceæ

PARSONSIA BROWNII (*J. Britten*) *Pichon* in Notul. syst., Paris *14*: 10 (1950).

Lyonsia brownii J. Britten in *J. Bot., Lond. 45*: 236 (1907);
L. straminea sensu F. Muell. *Plant. indig. Colon. Vict.* (Lithogr.) t.58 (1864–65), Benth. *Flor. aust. 4*: 321 (1868) pro parte, Ewart *Flor. Vict.* 953 (1931) atque auctt. var., *non* stricte R. Br. *Prodr. Flor. Nov. Holl.* 466 (1810).

The genus *Lyonsia* R. Br. is now generally merged with *Parsonsia* R. Br., described simultaneously (1809) but with several species. R. Brown had considered his *Lyonsia* to be monotypic, and in the *Prodromus* (p. 466) he cites two localities—Port Jackson region and Tasmania—for the single species *L. straminea*. However, in his mss.

notes at the British Museum, Brown definitely applied the name *Lyonsia straminea* to specimens from the Newcastle district ("ad ripas fluv. Hunters Patersons et Williams Rivers, Nov. 1804"), whereas his collection from the Tamar estuary (Tas., Jan. 1804) bears only the label "Lyonsia cfr. stramineam". Obviously there was some doubt concerning the identity of the latter. A crucial character mentioned in Brown's diagnosis (*Prodromus*, p. 466) is "*Squamae* hypogynae connatae", which certainly accords with many specimens collected in rain forests of eastern New South Wales and Queensland, but every Tasmanian (and Victorian) specimen examined by the writer has the hypogynal scales *entirely free*. There are indeed two distinct specific elements—a southern and a northerly —involved in Brown's circumscription of *Lyonsia*, and it is clear that his binomial should be attached to the northern element having, *inter alia*, the hypogynal scales fused into a corona. Another striking floral difference is that corolla-lobes of the latter have their inner surfaces densely covered with retrorse hairs, while those in the Tasmanian–Victorian plant are bearded only at the throat and the fruits are very much shorter (5–8 cm.).

Unfortunately, F. Mueller mistook the southern element for typical *L. straminea*, and in his *Essay Plant. Exped. Burdekin* 16 (1860) he re-described the true northern *L. straminea* under another name, *L. reticulata*. His excellent illustration of "*L. straminea*" (*l.c.*) portrays the essential features of the distinct southern taxon, for which misapplication of this name was perpetuated by Bentham (*l.c.* 1868), Rodway (*Tasm. Flor.*, p. 129, 1903), Ewart (*l.c.* 1931) and most other authors. J. Britten (*l.c.* 1907) put the matter right, after due discussion, by giving a new name to southern populations, and Mueller's analytical plate (t. 58 of 1864–65) becomes a very satisfactory iconotype. The differences between these related species of *Parsonsia* are set out by key in Beadle, Evans and Carolin's *Handb. vasc. Plant. Sydney District* 349 (1962); but one vital character was omitted, viz:

Hypogynal scales ± fused in a corona surrounding the glabrous ovary
—*P. straminea*

Hypogynal scales quite free around the finely pubescent ovary
—*P. brownii*

Parsonsia brownii ranges through the cooler forest gullies of Tasmania, Victoria and eastern New South Wales (at least as far north as the Macleay River), with an isolated record for Mt. Perry north of Gayndah, Queensland; while true *P. straminea* (R. Br.) F. Muell. extends from the Shoalhaven River (N.S.W.) into North Queensland—usually in rain forests. There is thus a wide overlap of the two species in and north of the Illawarra district, N.S.W.

Labiatæ

MENTHA DIEMENICA *Spreng.* Syst. Veg. 2: 724 (1825)
var. SERPYLLIFOLIA *(Benth.) J. H. Willis* comb. nov.

Mentha serpyllifolia Benth. in DC. *Prodr.* 12: 174 (1848);
M. gracilis R. Br. var. *serpyllifolia* (Benth.) Ewart *Flor. Vict.* 989 (1931).

The long-applied name for Slender Mint, *Mentha gracilis* R. Br. *Prodr. Flor. Nov. Holl.* 505 (1810), is a later homonym of the validly published *M. gracilis* Sole *Menthae Britannicae* 37, t.16 (1798) and therefore illegitimate. *M. diemenica* Spreng. is the correct binomial for the Australian plant, having only recently been adopted in Beadle, Evans and Carolin's *Handb. vasc. Plant. Sydney District* 418 (1962) and also in Hj. Eichler's *Suppl. J. M. Black's Flor. S. Aust.* 268 (1965). Eichler lists *M. serpyllifolia* Benth. as a synonym, but this variant is smaller in all its parts (rarely exceeding 15 cm. in height, the almost sessile ovate leaves less than 10 mm. long and flowers up to 6 per axil—often only 1) and is worthy of some recognition. A new combination is required upon transfer of the varietal epithet to the name *M. diemenica.*

The variety *serpyllifolia* is scattered on damp near-coastal heaths in Victoria (Foster and Wilson's Prom., Cape Nelson, but also with inland occurrences near Mt. Disappointment and on the King River), extending to South Australia (Guichen Bay and Torrens River) and Tasmania where apparently much more frequent.

PROSTANTHERA CRUCIFLORA *J. H. Willis* spec. nov.
ob corollam parvam albam subrotatam cruciformemque unica.

Frutex densa, erecta, glabra, 1·5–2 m. alta. Folia sordide griseovirens, ovata, integra, obtusa, ± 15 x 10 mm., minute papillosa. Flores in axillis superioribus, ± 8 per racemum brevissimum. Calycis labia 2 subaequalia, paene rotunda, ± 3 mm. longa. Corolla albida, tubo 4–5 mm. longo, limbo 8–10 mm. lato et subito horizontaliter expanso; lobis 5 subaequalibus (3–5 x 2–4 mm.) perobtusis, tribus inferioribus cruciformiter divergentibus. Stamina ad apicem tubi affixa. Antherae roseae, 1 — 1·3 mm. longae, loculi appendicibus perminutis praediti.

HOLOTYPE: Mt. Kaputar, N.E. New South Wales, on coarse sandstone at base of mount (± 900 m. alt.)—*G. W. Althofer*, Oct. 1962 (MEL).

Also examined: specimen cultivated at W Tree near Buchan, E.; Victoria, by *Leo Hodge*, 5 Dec. 1962 (MEL): specimen grown by cuttings from type plant, at Dripstone, N.S.W.—*G. W. Althofer*, 18th Nov. 1964 (MEL).

A rather dense, grey-green, virtually glabrous, erect shrub 1·5–2 m. (5–6 feet) high, but sometimes less than 1 m.; branchlets papillose, and with minute hairs restricted to 2 pairs of ridges that are decurrent from the margins of each petiole. *Leaves* only slightly odorous, dull greyish-green from a fine papillose indumentum (as in

Atriplex spp.); blades ± coriaceous, ovate, entire, obtuse, ± 15 mm. long, 8–10 mm. wide; petioles slender, tending to reflex, ± 4 mm. long. *Flowers* about 8 together in very short condensed racemes, ebracteolate on short pedicels in the upper axils. *Calyx* bilabiate, ± 8 mm. long, pale green, minutely papillose; the tube regularly infundibuliform; the subrotund lips 3 mm. long, subequal, very obtuse, sometimes emarginate, indistinctly veined. *Corolla* never hooded, almost glabrous, creamy-white except for a few minute rosy spots toward the base of mid-lobe on lower lip; the tube 4–5 mm. long and 1·5 mm. wide, suddenly expanding into a horizontal, viburnum-like limb (8–10 mm. wide); lobes 5, divergent, almost equal, 3–5 x 2–4mm., oblong-elliptic and very obtuse, the 3 of the lower lip very widely and cruciformly spreading. *Functional stamens* 4 or 2, conspicuously exserted and widely diverging; filaments slender, 3–4 mm. long, attached at apex of corolla-tube; anthers deep rose, 1–1·3 mm. long, ± reniform, each loculus tipped with a very minute, white, non-penicillate appendage. Mature style ± 7 mm. long, very shortly furcate. *Fruits* not seen.

The new species is apparently very localized, being known only from the type area in north-eastern New South Wales, among sandstone rocks at an altitude of nearly 3,000 feet. It also occupies quite an isolated position in the genus by reason of the small white corolla with widely expanded, almost equally lobed limb—reminiscent of a *Viburnum* flower or that of *Westringia rigida*. The virtually odorless *Atriplex*-like leaves are unusual too in a species of *Prostanthera*. The epithet *cruciflora*, in allusion to the cross-shaped lower lip of its corolla, was suggested by the discoverer, Mr. George W. Althofer of Dripstone, N.S.W.—for many years a most enthusiastic and successful grower of these native mint-bushes.

WESTRINGIA GLABRA *R. Br. Prodr. Flor. Nov. Holl.* 501 (1810) var. BACCHI (*B. Boivin*) *J. H. Willis* comb. nov.

W. violacea F. Muell. var. *bacchi* B. Boivin in *Proc. roy. Soc. Qd 60*: 110 (1949).

WESTRINGIA GLABRA *R. Br.* var. WILLIAMSONII (*Willis & Boivin*) *J. H. Willis* stat. & comb. nov.

W. williamsonii Willis & Boivin in *Proc. roy Soc. Qd 60*: 110 (1949).

Until the genus *Westringia* was revised by Bernard Boivin (*l.c.*) in 1949, *W. glabra* R. Br. had been regarded as rather a variable species with a scattered distribution from the Grampians in western Victoria to Shoalwater Bay in North Queensland—the type locality. In addition to *W. glabra* (sens. strict.) of New South Wales and Queensland, Boivin resurrected the name *W. violacea* F. Muell. for plants in Central Victoria and, in collaboration with the writer, described an isolated population at Mt. Zero, northern Grampians, as the new species *W. williamsonii*. It is now considered that neither of these Victorian taxa warrants distinction at the specific level.

The type area cited by Boivin for *W. violacea* (i.e. "near the mouth of the Goulburn River") is erroneous; Mueller's original label of March 1853 is simply "near the Goulburn River" which would be in the vicinity of the present Eildon Reservoir. The type itself is very fragmentary; but identical, almost contemporaneous and much better material in Melbourne Herbarium was labelled by Mueller "In the Dandenong Ranges". During the past 112 years no *Westringia* would seem to have been collected again, either on the Dandenongs or neighbourhood of the Goulburn River, and it is probable that the habitats visited by Mueller in 1853 have both been destroyed. A third locality cited by Boivin is the Lerderderg River Gorge—he consistently spells it "Lerderberg". Except for very short floral bracteoles in *W. violacea*, there is no constant morphological feature to distinguish it from *W. glabra* (in which the bracteoles are almost as long as the calyx-tube), and Bentham was surely justified in relegating the name *W. violacea* to synonymy in *Flor. aust.* 5: 131 (1870). Also to be found along the Lerderderg River above Bacchus Marsh is a variant having smaller narrower leaves that are arranged in whorls of four. This was published by Boivin (*l.c.*) as "*W. violacea* var. *bacchi* var. n." Since it is rather well-marked, this variety has been retained as such, but the infraspecific epithet is now transferred to the name *W. glabra* as a new combination.

As to *W. williamsonii* at Mt. Zero, the foliage departs from that of typical *W. glabra* in being larger and consistently quaternate, while the narrower hairy calyx-tube is always manifestly longer than the lobes and is subtended by 2 very short bracteoles. A comparable population was found on the Happy Valley arm of Lake Tyers (S.E. of Nowa Nowa, Vic.) by Miss Ruth Clark in Sept. 1952. At W Tree Creek falls (between Buchan and Gelantipy) and in the nearby Snowy River Gorge is a tall riparian *Westringia* to 10 feet high, having leaves in fours and relatively short bracteoles as in *W. williamsonii*, but with calyx-lobes equalling the glabrous tube—exactly as in typical *W. glabra*. It seems preferable to recognize these large-leaved, quaternate plants as a variant of *W. glabra*, rather than assign them to a separate species. Thus, the rank has been lowered but the epithet *williamsonii* retained at varietal level under *W. glabra*. Incidentally, the number of leaves per whorl in *Westringia* can be over-rated as a character of diagnostic importance: *W. senifolia* F. Muell., for instance, has usually 6 leaves per whorl on most parts of the Buffalo Plateau, yet at Mackey's Lookout (3,600 feet alt.) is a local community with leaves in whorls of five.

Scrophulariaceæ

EUPHRASIA GLACIALIS Wettst. *Monogr. Gatt. Euphrasia* 259, t. 13 (1896).

var. EGLANDULOSA *J. H. Willis* var. nov.

a forma typica differt sic: indumento non-glandulifero, interdum omnino sparso (tunc planta glabra esse videtur) sed saepe conspicuo albo-lanato caules, foliorum margines, calycis lobos atque antheras investienti; foliis usitate 9-dentatis.

HOLOTYPE: Summit of Mt. Nelse ("Nelson"), Bogong High Plains, N.E. alps, Victoria, on stony terrain in open grassland at ± 1,900 m. (= 6,200 feet) alt., flowers congested, white—*J. H. Willis*, 12 Jan. 1946 (MEL). *ISOTYPES* at MEL, NSW, K.

Also examined (all in MEL): N.W. slopes of Mt. Nelse near head of Big River, Bogong High Plains, N.E. alps, Vic., on grassland at ± 1,850 m. (= 6,000 feet) alt., form with purplish flowers and copious wool on edges of floral leaves and calyx-lobes—*J. H. Willis*, 12 Jan. 1946 & 15 Jan. 1947; Pretty Valley, Bogong High Plains, N.E. Vic., on grassy slopes bordering sphagnum bog at ± 5,500 feet—*J. H. Willis*, 15 Jan. 1946; The Razor Back between Mts. Feathertop & Hotham—*A. J. Tadgell*, Dec. 1914; Summit of The Twins, Vic.—*C. Walter*, Jan. 1899; Mt. Buffalo National Park, N.E. Vic., southern foot of The Bluff at ± 5,200 feet alt., form with elongated inflorescences—*J. H. Willis*, 18 Feb. 1963; Bimberi Range ± 1 mile north of Snowy Flats, A.C.T., "on sandstone scree with *Podocarpus alpinus*, alt. ca. 5,300 feet"—*P. Darbyshire* n. 73, 20 Dec. 1960 (also in CANB). [The writer has seen an undoubted example of the var. *eglandulosa*, collected on the Kosciusko Plateau, N.S.W., in Jan. 1966 by Mrs. Thistle Y. Stead and now in her private herbarium.]

The new variety differs from the typical form of the species (on Kosciusko Plateau) in the complete absence of glandular hairs. Density of its indumentum, however, varies greatly and hairs can be very sparse as in the type from Mt. Nelse (so that plants appear to be virtually glabrous) or copious and white-woolly, investing the upper parts of stems, edges of leaves and calyx-lobes and even the anthers. Flowers vary in colour from white to purple and may be either congested at the apex of the stem or in a relatively loose raceme, but gradations seem to connect the various forms and their features lack correlation. It is certain that the inadequately described *E. crassiuscula* Gandoger (1919) is identical.

Typical, glandular *E. glacialis* occurs in Victoria on the Cobboras Mountains, at between 5,500 and 6,000 feet, but is not known from any farther west. The variety *eglandulosa* is abundant on the higher Victorian alps (Mts. Bogong, Nelse, Feathertop, Hotham &c.), with an outlying, more elongated form on the Buffalo Plateau.

EUPHRASIA GIBBSIAE *du Rietz* in Svensk bot. Tidskr. *42*, Heft 4: 104 (1948).

forma SUBGLABRIFOLIA *du Rietz* (*l.c.*)
forma COMBERI *du Rietz* (*l.c.*).

In his key to the species of *Euphrasia* known from Tasmania, Professor G. E. du Rietz (*l.c.* p. 361) established four series in this genus: two (*Hookeriæ* and *Scabræ*) for the annual and two (*Striatæ* and *Collinæ*) for the perennial kinds. Among the perennials he described three new species, *E. gibbsiae* (series *Striatæ*) showing distinctly subdigitate leaves, but the Tasmanian endemics *E. gunnii* and *E. milliganii* (series *Collinæ*) having leaves that are not distinctly subdigitate. The type form of *E. gibbsiae*, with subcapitate clusters of white flowers, was from rocks on the summit plateau of Mt. Field East, near Lake Fenton. A collection from Mt. Mueller (5,000 feet) on the Victorian Baw Baws, by J. G. Luehmann and C. French Jnr. in Dec. 1892, was published simultaneously as *E. gibbsiae* forma *subglabrifolia*—the only known extension of the species to mainland Australia. In Melbourne Herbarium is a duplicate type specimen of this form which differs from the normal Tasmanian population in having the leaves almost *glabrous*, the floral bracts and calyces bearing predominantly *eglandular* hairs. What may be only a very reduced form of *E. gibbsiae*, with congested leaves on branches no more than 2 cm. high, has been collected at the Cobboras, far eastern Victoria. *E. gibbsiae* seems to differ from *E. striata* R. Br. (type from Mt. Wellington, Tas.) only in being glandular, while R. Brown's *E. alpina* (the name antedated by *E. alpina* Lam., 1788) is probably no more than a glabrescent alpine form of *E. gibbsiae*.

An interesting Victorian collection of this group in Melbourne Herbarium comes from the summit of Mt. Speculation, Barry Mountains at 5,600 feet (*leg.* J. H. Willis, 2 Jan. 1945). It has a markedly glandular indumentum; obovate-flabellate leaves to 10 mm. long are boldly cut into 5–7 finger-like lobes in the apical half, and the large purplish flowers are attractively veined. This conforms fairly well to the circumscription of du Rietz's *E. gibbsiae* forma *comberi* and is comparable with material from K. Col. on the track to Mt. Field West (Mt. Field National Park), Tasmania.

EUPHRASIA SCABRA *R. Br.* Prodr. Flor. Nov. Holl. 437 (1810) var. ALSA (*F. Muell.*) *J. H. Willis* comb. & stat. nov.

E. alsa F. Muell. in *Trans. phil. Soc. Vict. 1*: 107 (1855);
E. antarctica sens. Benth. *Flor. aust. 4*: 522 (1868), *non* Benth. in DC. *Prodr. 10*: 555 (1846).

G. Bentham's identification (*l.c.*) of the Australian alpine *Euphrasia alsa* F. Muell. with his own *E. antarctica* (published 22 years previously) can hardly be justified, despite the adoption of this view in F. Mueller's *Key Syst. Vict. Plant. 1*: 392 (1888) and A. J. Ewart's *Flor. Vict.* 1024 (1931). Type material of the former name differs from typical Magellanian *E. antarctica* in the following respects:

Indumentum glandular.
Leaf-lobes pinnate (not trident-shaped).
Calyx segments not revolute.
Ovary pubescent (not glabrous).

On the other hand, *E. alsa* is very closely related to annual *E. scabra*, from the typical form of which it diverges in its diminutive size and congested whitish flowers with conspicuous veins. It is here treated as an extreme variant of *E. scabra*. The taxon is confined to the higher alps of New South Wales and Victoria, collections at Melbourne Herbarium being:

> Munyang Mountains, 5–6,000 feet, N.S.W.—*F. Mueller*, Jan. 1855 (ISOTYPES); *ibidem*, " on wet gravelly places irrigated by the melting snow "—*F. Mueller*, Jan. 1855; Mt. Kosciusko, N.S.W.—*F. Mueller*, Jan. 1855; Pretty Valley between Mt. Jim & Rocky Knobs, Bogong High Plains, Vic., in sphagnum bogs at ± 5,500 feet—*J. H. Willis*, 15 Jan. 1946; Mt. Fainter, Vic., a dwarf annual from 5,500 to 5,900 feet—*A. J. Tadgell*, Feb. 1926.

EUPHRASIA SCABRA *R. Br.* var. CAUDATA *J. H. Willis* var. nov.

> a forma typica speciei recedit: indumento fortius glandulifero, foliis superioribus atque bracteis floriferis lobum longum caudiformem (usque ad 10 mm.) gerentibus, floribus usitate purpureis terminaliter congestis.

HOLOTYPE: Snowy Flats (near Mt. Gingera), Cotter River District, A.C.T., " on edges of swampy flat, partly under low eucalypt forest, alt. c. 5,200 feet "—*R. D. Hoogland* n. 8481, 28 Feb. 1962 (MEL). *ISOTYPES* at MEL, CANB.

Also examined (all in MEL): Mt. Wellington, Vic.—*F. Mueller*, Mar. 1861; Dargo High Plains, Vic.—*A. W. Howitt*, 1883 (in its shorter-pointed leaves and striped pale flowers approaching the var. *alsa*); Buckety Plain, Bogong High Plains at ± 5,000 feet, Vic.—*J. H. Willis*, 18 Jan. 1947 (yellow-flowered form); between Mack's Creek and head of Buckwong River near sources of Murray River, N.E. Vic.—*J. H. Willis*, 8 Feb. 1946 (white-flowered form); Cobboras Mountains at ± 5,800 feet, near western end of geodetic border, far N.E. Vic.—*J. H. Willis*, 10 Feb. 1946; Native Dog Creek, on flats at 4,000 feet near Cobboras Mtns., Vic.—*J. Stirling*, 20 Jan. 1883; *ibidem*—F. Mueller, Jan. 1854; Pilot tin mine huts at head of Ingeegoodbee River ± 4½ miles N.E. of Mt. Pilot, far S.E. New South Wales, in sphagnum bog at ± 1,270 m. (= 4,100 feet) alt.—*J. H. Willis*, 3 Feb. 1946; Munyang Mountains, 5–6,000 feet, N.S.W.—*F. Mueller*, Jan. 1874; Ginini Flats (± 5,200 feet) ± 1 mile N.E. of Mt. Ginini, A.C.T., in alpine peat bog—*R. Schodde* n. 1290, 8 Feb. 1961 (also in CANB).

The outstanding feature of this new alpine and subalpine variety is in the upper leaves and floral bracts which have a long, caudiform and rather acute apical lobe extending (to 10 mm.) far beyond the uppermost pair of lateral lobes. The flowers are mostly clustered toward the apex of each inflorescence—seldom dispersed along the axis as they frequently are in typical *E. scabra*—and their colour is usually mauve to purple, although forms with white or even yellow corollas occasionally appear in the Victorian alps. There is considerable variability in the occurrence of glandular hairs, but these are generally conspicuous and more strongly developed on the foliage than in typical *E. scabra*. The development of white woolly hair on the edges of the mucronate anther-loculi is also quite variable.

Attaining sometimes a height of 30 cm. (12 ins.), the variety *caudata* seems to pass gradually into var. *alsa* of more stunted growth in exposed situations, and both are co-extensive on parts of the Kosciusko Plateau and Bogong High Plains; but the latter typically has short blunt terminal lobes to its leaves and paler flowers conspicuously veined in purple. The former is a widespread and often frequent plant in and around sphagnum bogs of the Australian Alps between Mt. Wellington (Vic.) and the A.C.T.

The only notable monographs on Australian representatives of *Euphrasia* have been by G. Bentham (1868), R. von Wettstein (1896) and G. E. du Rietz (1931 & 1948). The first two authorities worked only upon dried material, without any knowledge of the living plants, but du Rietz spent some time in Australia between 1926 and 1927. Satisfactory delimitation of taxa within this genus is by no means easy, being complicated by intraspecific polymorphy and extensive hybridism. Attention is drawn to this situation in H. H. Allan's *Flora of New Zealand* 1: 860 (1961). Until population and genetical studies are carried out extensively in Australia, there is need for conservatism in the recognition of distinct species. Thus the writer currently prefers to express in terms of varietal rank the more obvious morphological differences between highland populations in the series *Scabrae* and *Collinae*.

Bignoniaceæ

PANDOREA JASMINOIDES (*Lindl.*) *K. Schumann* in Engler & Prantl Natürl. PflFam. IV 3b: 230 (1894).

Late in March 1964 Mr. W. Cane submitted to the Melbourne Herbarium a flowering sample of *Pandorea jasminoides*, grown in his nursery at Maffra, Victoria. The plant had been obtained several years before as a seedling from Gladstone Creek, a tributary of Freestone Creek near Culloden and about 17 miles N.N.E. of Maffra. The rather remote situation would point to a natural occurrence rather than an escape from cultivation of this subtropical species, its nearest approach seeming to be in far N.E. New South Wales (some 700 miles distant). Widespread *P. pandorana* is also present in the Avon River watershed. Great interest therefore attaches to a spontaneous record of *P. jasminoides* in eastern Victoria. Unfortunately, the whole area at Gladstone Creek was burnt out in a severe bushfire during Feb.–March 1957, but a recent inspection has revealed limited regeneration of this trumpet-flower.

Lentibulariaceæ

UTRICULARIA VIOLACEA *R. Br.* Prodr. Flor. Nov. Holl. 431 (1810).

Until quite recently, the diminutive but elegant bladder-wort *Utricularia violacea* was unknown from any locality east of King George's Sound, West. Aust. Then, in October 1963, the writer identified as such a collection made by Messrs. D. N. Kraehenbuehl and A. C. Beauglehole (*A.C.B.* n. 5721) on the 4th of that month at Yallum, about 9 miles west of Penola, far S.E. South Australia—"on moist peaty sand between clumps of *Melaleuca oraria* [= *M. neglecta*]". This identification was subsequently confirmed by Mrs. Rica Erickson of Bolgart, W.A. (a specialist in the group), and the record was published by Dr. Hj. Eichler in his *Supplement to J. M. Black's Flora of South Australia* 284 (1965). Early in November 1964 Beauglehole succeeded in locating *U. violacea* at five places along the Dergholm–Penola road in far western Victoria—first records for this State. His numbers 6,516, 6,504 and 6,517 are now represented in Melbourne Herbarium, being respectively from against the South Australian border, from 3 miles east, and 6 miles east of it. All were collected on 9 Nov. 1964, in shallow temporary swamps where associated on wet sand with minute species of *Stylidium* and other ephemerals.

The solitary flowers terminate filiform scapes about 3–5 cm. long, are most attractive and violet-like: each vividly purple corolla is 4–7 mm. long and wide, its very broad, 3-lobed and veined lower lip with yellow throat and a prominent yellowish spur 3–5 mm. long.

Goodeniaceæ

GOODENIA LINEATA *J. H. Willis* spec. nov.

Herba perennis rosulata. *Folia* numerosa, paene glabra, anguste oblanceolata vel subspathulata, sat crassa, 3–8 (—15) cm. longa, ad partem latiorem 3–9 mm. lata, integra vel obscure et remote denticulata, marginibus paulum revolutis. *Caules floriferi* graciles, erecti, 10–30 (—50) cm. longi, bracteis tribus (vel pluribus) parvis erectis praediti. *Flores* ± 4 (raro ad 6), erecti, cymam laxam paniculatam glandulosam formantes; pedicelli nudi, 1–4 cm. longi. *Calyx* breviter sed dense glanduloso-hirsutus, tubo obconico (2–4 mm. longo) et lobo 5 erecto lanceolato (4–7 mm. longo). *Corolla* ± 20 mm. longa, aureo-flava, ad dimidium inferiorem lineis verticalibus conspicuis atro-purpureis ornata, eius lobis 5–7 mm. latis (petali medium viride, herbaceum, glanduloso-pilosum ut in calyce). *Antherae* ellipticae 2–2·5 mm. longae. *Stylus* validus 8–10 mm. longus, a pilis longis albis varie obtectus; indusium cyathiforme, ± 3 mm. latum, aliquid cinereum, in margine a ciliis albis (± 0·5 mm. longis) dense fimbriatum. Fructus immaturus obconicus 3–5 mm. longus, dissepimento sublunato 2·3 mm. longo. *Ovula* circiter 12–18, in quoque loculo ut series duae instructa, pallida, plana, anguste limbata, rotunda, 0·3–0·5 mm. lata. *Semina* ignota.

HOLOTYPE: Grampians, W. Victoria, at summit of Mt. William (1,180 m. or 3,800 feet alt.) where locally frequent among sandstone rocks—*J. H. Willis*, 3 Jan. 1964 (MEL). *ISOTYPES* at MEL, NSW, K.

PARATYPES: Grampians, between Mt. Thackeray and Chimney Pot Gap in Victoria Range, Vic.—*P. E. Finck & A. C. Beauglehole*, 24 Feb. 1957 (*A.C.B.* n. 4,059, MEL & NSW); Grampians, east of Chimney Pot Gap in Victoria Range—*P. E. Finck & A. C. Beauglehole*, 15 Apr. 1957 (*A.C.B.* n. 4,097, MEL).

Also examined: Grampians, Kalimna Falls at eastern foot of Mt. William—Miss *D. Dawson*, 29 Oct. 1961 (MEL); Old Mafeking goldfield 5½ miles S.S.W. of Mt. William—*Ellis M. Tucker*, 18 Dec. 1965 (MEL).

Perennial herb with radical foliage. *Leaves* numerous, virtually glabrous, narrowly oblanceolate to almost spathulate, rather thick, 3–8 (— 15) cm. long, 3–9 mm. broad at the widest upper part, entire to obscurely and distantly denticulate, the margins slightly revolute. *Flowering stems* erect, slender, 10–30 (— 50) cm. long, with 3 or more small, erect, remote bracts; *inflorescence* a loose, terminal, glandular, paniculate cyme of about 4 (rarely 6) erect flowers on naked pedicels 1–4 cm. long. *Calyx* often dark, shortly but densely glandular-hairy, the obconic tube 2–4 mm. long and 5 erect lanceolate lobes 4–7 mm. long. *Corolla* ± 2 cm. long, golden yellow, but with prominent vertical stripes (and smaller netted veins) of deep purple in lower half, the lobes 5–7 mm. wide; green herbaceous centre of petals glandular-hairy as in calyx. *Anthers* elliptic, 2–2·5 mm. long. *Style* stout, 8–10 mm. long, with scattered to moderately dense, long spreading, white hairs; indusium cup-shaped, ± 3 mm. wide, greyish, densely fringed along margin with white cilia ± 0·5 mm. long, but dorsally with more scattered, longer hairs. *Immature fruit* obconic, 3–5 mm. long, the lunate dissepiment 2–3 mm. long. *Ovules* ± 12–18, arranged in 2 rows in each loculus, pale, flat, narrowly bordered, ± rotund, 0·3–0·5 mm. wide. Ripe seeds not yet examined.

The new species is of uncertain affinity; but, except for its several-flowered peduncles, is apparently close to the series *Pedicellosae* (including *G. pinnatifida, G. glauca* and *G. havilandii*). It would seem to be endemic in the Victorian Grampians, where of scattered and discontinuous occurrence. The colonies on Mt. William, however, are conspicuous, and it is rather surprising that earlier botanists (Mueller, Wilhelmi, Sullivan, Williamson &c.) failed to collect *Goodenia lineata* on this eminence. The specific epithet is in allusion to the boldly striped lower half of the corolla.

GOODENIA AFFINIS *de Vriese* in Natuurk, Verh. holland. Maatsch. Wet. 2s., *10*: 137 (1854).

Described originally from Western Australia, *Goodenia affinis* was reduced in Bentham's *Flora australiensis* 4: 63 (1868) to varietal status as *G. geniculata* R. Br. var. *eriophylla* Benth., with the comment: "To this belong the W. Australian and some of the S. Australian specimens". Its rank was restored by K. Krause who monographed *Goodeniaceæ* in *Pflanzenreich IV 277* (Heft 54): 54

(1912), five West Australian localities being cited—from Swan River to Cape Riche—but none from elsewhere. J. M. Black, *Flor. S. Aust.* 554 (1929), retained this taxon at specific level and accorded it a wide distribution in South Australia (Eyre and Yorke Peninsulas, Murray lands and northward to the Flinders Range), remarking: " The leaves of the West Australian specimens are usually broader, more obtuse, and more regularly crenate than ours ".

Black correctly emphasized the distinctive indumentum of *G. affinis*—both surfaces of the leaves being more or less silky-woolly with long, white, appressing simple hairs that mask a close mat of smaller stellate hairs beneath. In this character, which Krause (*l.c.*) failed to mention, *G. affinis* differs manifestly from the related taxa *G. geniculata* and *G. primulacea*, leaves of which are much less hairy (usually appearing green on the upper surfaces) and without any stellate vestiture. A largely co-extensive range in South Australia is given to all three species by Black. It is questionable whether *G. primulacea* Schlechtendal should be maintained as a species distinct from *G. geniculata*, and Bentham (*l.c.*) had reduced it to a variety of the latter; the principal difference lies in the *white-tomentose* under surfaces of its leaves—in typical *G. geniculata* these are uniformly pubescent and greenish on both faces.

Throughout sand-hill country of the Victorian Mallee, from the Little Desert to extreme north-western parts of Millewa County, is a silvery-leaved rosulate *Goodenia* that has been consistently identified either with *G. geniculata* or its variety *primulacea*. Leaves of this frequent Mallee plant do often exhibit a greenish upper surface that is less hairy than the underside; but they are also felted with *abundant stellate hairs*. Desert material from N.W. Victoria was forwarded to Dr. H. Werner in Halle, East Germany, for careful comparison with Schlechtendal's type of *G. primulacea* (" in sandigem Boden bei Bethanien ", S. Aust.); he pronounced (11/5/1955) the former as quite distinct in its patently hairier foliage with a basic stellate indumentum. For the present, it is considered that this population would be much better referred to a form of *G. affinis* than to *G. geniculata* or *G. primulacea*—J. Ros Garnet's reference in *The Vegetation of Wyperfeld National Park* 83 (1965) would seem to be the first published record of *G. affinis* for Victoria. Revisional studies in the series *Rosulatae* Krause (of *Goodenia*), involving re-assessment of the importance of diagnostic criteria in current use and realignment of some taxa, are certainly a desideratum.

Stylidiaceæ

STYLIDIUM BEAUGLEHOLEI *J. H. Willis* spec. nov.

> ob staturam, habitum, calycem et verticillum foliorum radicalium *S. brachyphyllum* Sond. [=*S. inundatum* R. Br.] accedit, sed sic differt: corolla plus minus flabellata (ut in *S. rhipidio* Erickson & Willis), eius segmentis non lateraliter geminatis intus pallide roseis quoque extrinsecus a linea lata saturate rosea notato; petalis 2 posterioribus quam paribus anterioribus paene duplo longioribus (*cf.* par posterius brevius in *S. brachyphyllo*); gibbulis 6 minutis (aut appendiculis inchoatis) in fauce faciliter distinguendis.

HOLOTYPE: Southern Victoria Range, Grampians, W. Victoria, widespread on moist heath ± 4 miles north from Victoria Point—*A. C. Beauglehole* no. 6506, 21 Nov. 1964 (MEL). *ISOTYPE* at NSW.

PARATYPES: *Ibidem*—*A. C. Beauglehole* n. 6507, 21 Nov. 1964, (MEL, AD, K).

Also examined (all collected by *A. C. Beauglehole* and all in MEL):

Far W. & S.W. Vic.: Penola road ± 11½ miles W. of Dergholm—*A. C. B.* n. 6500, 5 Nov. 1964; ½ mile N. of Penola road at South Aust. border & ± 13 miles W. of Dergholm.—*A. C. B.* n. 6501, 9 Nov. 1964; Penola road 6 miles W. of Dergholm—*A. C. B.* n. 6503, 9 Nov. 1964; 1½ miles S. of Crawford River near Hotspur—*A. C. B.* n. 6505, 20 Nov. 1964; 1½ miles N. E. of " Ink Pot ", Lower Glenelg R. area—*A. C. B.* n. 6508, 29 Nov. 1964; 3 miles N. of " Ink Pot " Lower Glenelg R. area—*A. C. B.* n. 6509, 29 Nov. 1964; 1 mile W. of Greenwald, Lower Glenelg R. area—*A. C. B.* n. 6518, 7 Dec. 1964; 2 miles N. of Dergholm–Penola road & 6 miles E. of South Aust. border—*A. C. B.* n. 6515, 9 Nov. 1964. Noted by *A. C. B.* at Port Campbell. Nat. Park, and on Pomonal road near Hall's Gap—both Nov. 1966.

Far S.E. South Aust. (in collab. *D. N. Kraehenbuehl*): Northern side of Penola–Dergholm road & ½ mile W. of Victorian border—*A. C. B.* n. 6514, 8 Nov. 1964; 3 miles N.N.W. of Bullock Swamp & ± 10 miles N.E. of Penola—*A. C. B.* n. 6528, 8 Jan. 1965 (Dupl. in AD, K); Yallum, 9 miles W. of Penola—*A. C. B.* n. 6527 & 6529, 5 Jan. 1965 (Dupl. in AD).

Ephemeral herb 2–4 (—5) cm. high, on moist heath and in shallow seasonal swamps. *Leaves* radical, ligulate, obtuse, 3–5 mm. long, ± 0·7 mm. wide. *Scape* glabrous, swollen and fleshy below insertion of leaf-rosette, usually simple but sometimes a small secondary one from same rosette, bearing 1–10 erect flowers (usually 3–5) in an open panicle; each branch subtended by a small elliptic bract. *Calyx* glabrous except for a few very scattered minute glandular hairs, green to purplish, the linear tube 4–7 mm. long and obtuse lobes 1–1·5 mm. (2 of them ± united to apex). *Corolla* very delicate, pale pink on inner face, but with a deeper coloured stripe and rosy suffusion on under side of each petal, ± fan-shaped; posterior pair of petals obovate-spathulate, 1·5–2 mm. long, 0·8–1 mm. wide at rounded tips, almost twice the length of the similar anterior petals which flank them; labellum minute, ovate; throat with 6 minute but discernible humps or rudimentary appendages; column short and stout (1–1·5 mm. long), with greenish anthers. *Capsule* oblong-linear, often becoming reddish, 6–8 mm. long. *Seeds* not seen.

Stylidium beaugleholei, which is widespread in far south-western Victoria (extending into South Australia), belongs to the group of small, ephemeral triggerplants having linear calyx-tubes, e.g. *S. brachyphyllum* Sond. Throughout its range the new species was found to accompany but to remain perfectly distinct from *S. brachyphyllum* [= *S. inundatum* R. Br.], differing constantly thus:

> Corolla ± fan-shaped, its segments not laterally paired, pale pink with deep rose stripe along under-surface of each lobe; 2 posterior petals almost twice as long as anterior flanking pair (*cf.* shorter posterior pair in *S. brachyphyllum*); 6 minute humps or rudimentary appendages easily discernible in throat.

In the fan-like orientation of corolla-lobes it recalls the West Australian *S. rhipidium,* but that rare plant differs in having a rather wiry glandular-hairy scape, much longer white posterior petals (5–6 mm.) and well-developed capitate throat-appendages. Other associated pygmy plants at various places are *Isoëtes drummondii, Scirpus & Schoenus* spp., *Trithuria submersa, Mitrasacme distylis, Utricularia violacea* and *Stylidium perpusillum.*

The specific epithet is bestowed as a token of honour to Mr. A. Cliff. Beauglehole, of Gorae West near Portland, an assiduous observer of pygmy plants (including cryptogams), who discovered the present species, recognized its distinctiveness and made the only collections known to date. Mr. Beauglehole has built up a large, valuable private herbarium and possesses an unrivalled knowledge of the floristics of far south-western Victoria.

STYLIDIUM INUNDATUM *R. Br.* Prodr. Flor. Nov. Holl. 571 (1810).

S. brachyphyllum Sond. in Lehmann *Plant. Preiss 1*: 386 (1845).

Stylidium brachyphyllum, described originally from Western Australia and restricted to that State by Bentham in his *Flor. aust.* 4: 25 (1868), was recorded by the present writer in *Vict. Nat.* 73: 44 (1956) as having also a wide distribution over south-eastern Australia. In her monograph, *Triggerplants* 54 (1958), Mrs. Rica Erickson cites a number of localities in S. Aust., N.S.W., Vic. and Tas. The only locality given by her for the closely related but imperfectly known *S. inundatum* R. Br. is that of its type collection —the vague " South Coast " which doubtless refers to some part of South Australia.

Apart from the concentration of leaves into a basal rosette in *S. brachyphyllum* and their dispersal along the base of the scape in *S. inundatum,* the circumscriptions of these two taxa are virtually identical and there seems to be no other constant feature to distinguish them. The laterally-paired orientation of delicate, glistening, very pale pink to white corolla-lobes (the upper posterior pair being shorter than the curved anterior) is precisely the same in both, as is the bare throat. After examining hundreds of specimens throughout Victoria, the writer is now convinced that the criterion of the basal rosette is an unstable one; presence or absence of a rosette depends on the speed of elongation of the swollen stem-base. He therefore advocates the reduction to synonymy of *S. brachyphyllum* under *S. inundatum*—the older-published name.

Compositæ

OLEARIA ALLENDERAE *J. H. Willis* spec. nov.

ex affinitate O. *stellulatae* (Labill.) DC. et O. *rugosae* (F. Muell. ex Archer) Hutchinson, sed a priore differt foliis comparate latioribus, ad apicem obtusis, irregularius dentatis, eius marginibus anguste revolutis, in superficie sine pilis stellatis atque subter manifeste reticulatis; a his speciebus duabus recedit habitu gracili, foliis multo parvioribus (1–3 cm. longis) auriculatisque, inflorescentiis non paniculatis, pedunculis brevioribus (5–10 mm.) atque acheniis omnino glabris.

HOLOTYPE: Wilson's Promontory, S. Victoria, in swampy depression ± 2 miles north of Darby River crossing—*Marie Allender,* 27 Oct. 1964 (MEL). *ISOTYPES* at MEL, NSW, AD, K.

PARATYPE: *Ibidem—Marie Allender,* 24 Oct. 1961 (MEL).

Shrub slender, sparingly branched, 1–2 m. (= 3–6 feet) high, with elongated, leafy, purplish, costate branches that push up through dense paludal shrubberies. Leaves rigidly coriaceous, ovate-lanceolate to oblong, 1–3 cm. long, 5–12 mm. wide, obtuse at apex, auriculate at base, with petiole only 1–2 mm. long; margins narrowly revolute, crenate to coarsely and bluntly toothed; upper-surfaces shining, deeply wrinkled with small bullate sections, asperate or almost smooth; under-surfaces reticulate, whitish from a fine mat of minute stellate hairs. *Inflorescence* 3–8 cm. long, leafy throughout, consisting of mostly solitary capitula in the upper axils. *Capitula* on short peduncles 5–10 mm. long (rarely exceeding the floral leaves), broadly funnel-shaped, 6–8 mm. wide at anthesis; phyllaries 2- to 3-seriate, ± 20 (± 8 outer bracts being shorter), lanceolate to oblanceolate and broadly acute, the innermost 4–5 mm. long, purplish but colour at first masked by a woolly-white stellate indumentum that persists at base and on the apical dorsum. *Ray-florets* ± 10–12, female, with white ligules 6–9 mm. long and 1–2 mm. wide. *Disk-florets* 13–17, bisexual, purplish at first then yellow, with narrowly funnel-shaped corolla 4–5 mm. long; anthers pale, 2 mm. long; style-arms narrowly elliptic, purple, pruinose, ± 1 mm. long. *Achene* elliptic, flattened, glabrous, with ± 5 prominent vertical ribs, 2–2·5 mm. long, ± 0·8 mm. wide; pappus-bristles 30–40, ± 5 mm. long, white-silky, minutely scabrid and slightly thicker at acuminate tips, fused into a short corona at base.

The affinities of the new species are closest to O. *stellulata* (Labill.) DC. and O. *rugosa* (F. Muell. ex Archer) Hutchinson; it differs from the former in having no stellate hairs on the upper-surfaces of leaves (which are relatively narrower, more regularly toothed, acute at apices, without revolute margins and less reticulate in O. *stellulata*), and from both these species it departs in its slender habit, much smaller auriculate leaves, non-paniculate inflorescences, shorter peduncles and quite glabrous achenes.

The apparent restriction of *Olearia allenderae* to a small tract of marshy land on Wilson's Promontory is remarkable. Since a few higher plants, that are found in Victoria only at Wilson's Promontory (e.g. *Lepidium praetervisum* and *Pimelea drupacea*), occur also in Tasmania, it seemed appropriate to submit the original collection of *O. allenderae* to Hobart Herbarium for examination. Dr. Winifred Curtis replied (24/5/1962): "I cannot match your specimen of *Olearia* with any from Tasmania".

The author has pleasure in naming this graceful plant after its discoverer, Miss Marie Allender (of the Melbourne Herbarium staff), who has advanced our knowledge of the Victorian flora by several other noteworthy discoveries.

OLEARIA RAMULOSA (*Labill.*) *Benth.* var. RIGIDA *J. H. Willis* in Muelleria *1*: 28 (1956).

This very distinctive daisy-bush attains a height of 3–6 feet, has rigidly erect branches, relatively long scabrid leaves (to ½ inch), white flower-heads massed attractively in elongated spike-like racemes, and it is undoubtedly rare. At the time of description it was known only from on and slightly north of the Strathbogie Range, N.E. Victoria—rocky granitic terrain. Subsequently an un-named specimen was located in Melbourne Herbarium from Mt. Korong—also of granite—more than 100 miles westward (collected by Dr. H. Beckler on 14 Oct. 1861). The author failed to re-discover this variety while botanizing on Mt. Korong a century later (31 Oct. 1964); but he had the great satisfaction, on 16 January 1966, to find a single old, yet vigorous shrub of it on the westernmost declivities of Mt. Beckworth, ± 4½ miles S.W. of Clunes. The occurrence, again among granite rocks, extends the known range to 57 miles south of Mt. Korong and no interim collection would seem to have been made since that of the type (at Lima East) in November 1917.

HELICHRYSUM ACUMINATUM *DC.* Prodr. *6*: 188 (1838)

Dr. Winifred Curtis, *Student's Flor. Tasm.* 2: 331 (1963), furnishes an adequate account of *Helichrysum acuminatum*, with the note: "widespread and locally frequent in montane grassland and on mountain plateaux, reaching the exposed summits"; but no indication is given that this species extends to mainland Australia. Actually, it is also quite abundant on the alpine peaks and high plains of eastern Victoria, southern New South Wales and the A.C.T., where it has long been confused with *H. bracteatum* (Vent.) Andr.—a much more variable, taller, branching plant of montane forests, coastal tracts and the Mallee. Bentham had synonymized *H. acuminatum* under *H. bracteatum* in his *Flor. aust.* *3*: 620 (1866), and apparently Dr. Curtis is the only author during the past century to resurrect the former name. De Candolle's *H. acuminatum* may be recognized at once by its simple, erect, leafy flowering stem

(10–25 cm.), its large solitary golden to orange flower-heads (3–5 cm. wide when expanded) and especially by the long *acuminate-lanceolate* intermediate bracts (always ± obtuse in the case of *H. bracteatum*). No previous record for Victoria would seem to have been published.

HELICHRYSUM DEALBATUM *Labill.* Nov. Holl. Plant. Specim. 2: 45, t. 190 (1806).

This rhizomatous herb is widespread and often abundant in Tasmania, but of very limited and scattered distribution on the northern side of Bass Strait. The only mainland localities known, until quite recently, were Wilson's Promontory, Foster, Nine Mile Creek near Hedley, Bruthen and Bennison High Plains. Then, on 29 Nov. 1964, Mr. A. C. Beauglehole found a small, very isolated colony on wet heathland of the Lower Glenelg watershed, about 6 miles north of Mt. Kincaid in far S.W. Victoria—a noteworthy extension of range and the most westerly locality to be recorded. Specimens from his collection, n. 6511, have been lodged at Melbourne Herbarium; they have comparatively large flower-heads (±3 cm. wide, with intermediate bracts of the involucre beautifully crimson-tinted and plicate when dry.

HELICHRYSUM ROGERSIANUM *J. H. Willis* spec. nov.

> ad *H. ledifolium* (DC.) Benth. atque *H. ericetum* W. M. Curtis Tasmaniae proxime accedit; a priore differt habitu virgato, statura altiore (1·5–2·5 m.), foliis angustioribus (0·5–2 mm.), capitulis angustioribus flosculos pauciores (3–7) continentibus; a secundo foliis multo longioribus angustioribusque inflorescentiis majoribus et involucri squamis nunquam purpureis distinguitur.

HOLOTYPE & ISOTYPE (with mature achenes): Brumby Point, N.E. sector of Nunniong Plateau, E. Victoria, at ± 1,080 m. (= 3,500 feet) alt. in montane forest on shaded southerly slopes above Little Reedy River—*K. C. Rogers*, 10 Mar. 1964 (MEL).

PARATYPES: *Ibidem*—*K. C. Rogers*, 18 Apr. 1964 (MEL, NSW); Laver's Hill road 2·5–3·5 miles S. of Chapple Vale, Otway Ranges, S. Vic., at ± 155 m. (= 500 ft.) alt.—*Helen I. Aston* n. 813, 16 Nov. 1960 (MEL, CANB, NSW, BRI, AD, HO, K, BM, L, G).

Also examined (all in MEL): *Ibidem* (viz Laver's Hill road, &c.) —Mrs. *Winifred Denny*, 19 Nov. 1960 (duplicates to be distributed to other herbaria); Chapple Vale road 4–5 miles N.W. of Laver's Hill, Otway Ranges, S. Vic.—*J. H. Willis*, 26 Nov. 1961 (also NSW); Gable End Track ± 0·5 miles S. of Miller's Hut, in Mt. Wellington region at ± 1,400 m. (= 4,600 ft.) alt., only a single bush noted—*J. H. Willis*, 12 Mar. 1966.

Shrub 1·5–2·5 m. (= 5–7 feet) high, with strong sweetly spicy aroma; branches rigidly erect, minutely cottony, resinous, bearing prominent scars of the fallen foliage. *Leaves* spreading widely (almost perpendicular to axis), linear, 1–2 cm. long, 0·5–2 mm. wide, the entire margins closely revolute to mid-rib and apices blunt or slightly acute; upper surfaces transversely rugulose, rather cottony-hairy at first, finally almost glabrous; under surfaces (where visible) cottony-white, but often stained yellow by a copious exudation of resin. *Inflorescence* a dense corymbiform panicle of capitula, 2–4 cm. wide and 1–2 cm. high, terminating each branchlet. *Capitula* up to 50 per panicle, each on a short yellowish peduncle 1–2 mm. long, broadly cylindrical, 4–5 mm. long and 1·5–2 mm. wide at anthesis; phyllaries about 4-seriate, relatively few (up to 18), the 7–9 outer ones yellowish, scarious but diaphanous, obtuse, resinous and ± fringed with loose cottony hairs, the 7–10 inner ones 3–4 mm. long, with narrow claws and obovate, white, opaque, crenulate radiating tips 1–2 mm. long. *Florets* 3–7, hermaphrodite, but not all fertile, narrowly funnel-shaped, 3–4 mm. long, creamy white; anthers pale, ± 1·2 mm. long; style-arms ± 0·5 mm. long, yellow, truncate at apex. *Achene* shortly cylindrical, plump, ± 1·5 mm. long, 0·5 mm. wide, dark, papillose-pubescent all over and only faintly ribbed at maturity; pappus-bristles 20–30, free, 2–3 mm. long, finely barbellate.

Affinities of the new species are closest to the endemic Tasmanian *H. ledifolium* (DC.) Benth. and *H. ericetum* W. M. Curtis; it differs from the former in being much taller, of virgate habit, with narrower leaves and capitula and fewer florets (8–15 per capitulum in *H. ledifolium*), and from the latter in having much longer narrower leaves, larger inflorescences and the phyllaries never purplish. The extremely localized occurrence (at most only a few acres) in each of three quite disjunct areas in Victoria is astonishing, especially as one habitat is almost subalpine and the other adjacent to near-coastal heathland; but an even more dramatic discontinuity obtains with *Bertya findlayi*—viz sources of the Murray River and western slopes of the Grampians (Victoria Range), 340 miles apart. It might be expected that *Helichrysum rogersianum* will eventually appear also in some mountainous tract of S.E. New South Wales.

The specific epithet is a tribute to the author's friend, Mr. Keith C. Rogers of " Rockbank ", Wulgulmerang, who discovered this shrub at Brumby Point (where he also found the remarkable new and endemic *Monotoca rotundifolia* and, for the first time, a Victorian colony of exceedingly rare *Acacia lucasii*), who has made numerous noteworthy extensions to the distribution of plant species in far north-east Gippsland, and has made it possible for the writer to accompany him on many enjoyable, productive botanical excursions into remote mountain regions.

CASSINIA UNCATA *A. Cunn. ex DC.* Prodr. *6*: 156 (1838)

C. complanata J. M. Black in *Trans. roy. Soc. S. Aust. 52*: 230 (1928).

Duplicates of type *Cassinia uncata* (Liverpool Plains, N.S.W.) and of *C. complanata* (Murray Scrub, S. Aust.) are in Melbourne Herbarium, and the differences purporting to separate them are a matter of degree alone. In general, the former has more strongly uncate scabrid leaves that may attain lengths up to 5 cm., while those of the latter are often smooth, wrinkled and less than 3 cm. long; but these features are no more than might be expected to occur with a change of habitat—rocky montane tracts in the case of *C. uncata,* and mallee sand-hills frequently in *C. complanata.* Both extremes occur in Victoria, also intermediate populations, and neither involucres nor florets display any reliable distinguishing character. If, as now considered, the taxa are conspecific, then the first-published name *C. uncata* must take precedence.

APALOCHLAMYS SPECTABILIS (*Labill.*) *J. H. Willis* comb. nov.

Calea spectabilis Labill. *Nov. Holl. Plant. Specim. 2*: 42, t. 186 (1806);
Cassinia spectabilis (Labill.) R. Br. in *Trans. Linn. Soc. Lond. 12*: 128 (1817);
A. Billardierii DC. *Prodr. 6*: 157 (1838).

This tall, tobacco-like and highly aromatic biennial of sandy, near-coastal habitats in south-eastern Australia holds quite an isolated position, if included in the genus *Cassinia* to which it has generally been referred by all Australian systematists during the past century and a half. A. H. G. Cassini in *Dict. Sci. nat. 56*: 223 (1828) had proposed for it a distinct genus, and following is a translation of his reasons for erecting *Apalochlamys*:

> "This genus or sub-genus, founded on *Cassinia spectabilis* of Mr. Brown, is distinguished by 3 characters: 1. by its involucre formed of very slender, soft, diaphanous, almost colourless scales, a little coriaceous at base; 2. by its pappus of entirely filiform scalelets, very fine and very barbellate; 3. by its herbaceous stem with decurrent leaves".

The name signifies "soft envelope" and was chosen in allusion to the texture of the involucre. Cassini did not use the binomial *A. spectabilis* nor make it clear that he was publishing a combined generic-specific description to cover a single species, Labillardiere's *Calea spectabilis.* Thus, according to Article 33 (Montreal revision of International Code), it would appear that a formal new combination is obligatory with acceptance of Cassini's genus. De Candolle (*l.c.*) did accept *Apalochlamys* and described three species thereunder, citing *Calea spectabilis* as a synonym of the first one, *A. billardierii.* However, he should have retained for it the validly published epithet *spectabilis,* and his binomial is illegitimate. Bentham subsequently (1866) reduced all three Candollean names to synonymy under *Cassinia spectabilis.* Believing that *C. spectabilis* is worthy of distinction at generic level from other members of *Cassinia,* and constitutes a natural monotypic genus, the writer has established (above) the required nomenclatural combination under *Apalochlamys.*

CALOMERIA AMARANTHOIDES *Vent.* Jardin Malmaison 2: t. 73 (Oct. 1804).

Humea elegans Sm. *Exotic Botany 1*: t. 1 (Dec. 1804).

The genera *Calomeria* and *Humea* were described independently, at about the same time, and believed by their respective authors to be monotypic. Both descriptions (with plates) refer undoubtedly to one and the same species. De Candolle in his *Prodr. Syst. nat. Regn. veg. 6*: 157 (1838) synonymized *Calomeria* under *Humea*, and has been followed by all succeeding authors—F. Mueller (1858), G. Bentham (1866) &c. A careful investigation of the dates of publication during recent years, however, has revealed that Ventenat's name *Calomeria* was effectively published in Oct. 1804, two months ahead of Smith's *Humea* (Dec. 1804) and, according to the present International Code of Botanical Nomenclature, it must be re-established. Considering long usage in Australia of the name *Humea* (for a conspicuous and decorative herb, sometimes grown in gardens as " incense plant "), a case for its conservation might well be submitted to the Bureau of Nomenclature. At present there is an obligation to adopt *Calomeria* and, even if *Humea* were eventually conserved, a new combination " *H. amaranthoides* " would become necessary. Incidentally, E. P. Ventenat dedicated his genus to Napoleon Bonaparte, likened the odour of *C. amaranthoides* to sage and mentioned that the original seeds had been sent by M. Dumont Courset—" a first-class correspondent " of the Institute of France.

In his *Fragmenta Phyt. Aust. 1*: 17 (1858) F. Mueller widened the original circumscription of *Humea* Sm. and established two sections: Sect. I *Calomeria*, containing only the herbaceous type species *H. elegans*, and Sect. II *Haeckeria* with a pair of shrubby species, *H. ozothamnoides* and *H. cassiniacea* [= *H. cassiniiformis*] that he had previously referred to his own new genus *Haeckeria* (1852). Two additional taxa have subsequently been added to the latter section, so that five species of *Humea* are now being recognized for Australia. Spencer le M. Moore (1911) admitted three other *Humea* species as endemics in South Africa, but these have since been disposed of—presumably as aberrant members of *Helichrysum*, lacking a pappus. Bentham (1866) had upheld this wider concept adopted by Mueller who later contributed " Notes on the limits of the genus *Humea* " to *Vict. Nat. 9*: 143–44 (Jan. 1893), wherein he enlarged *Humea* even further so as to include the epappose genera *Pithocarpa* and *Acomis* as well.

Calomeria is quite isolated and bears exactly the same relationship to *Haeckeria* as *Apalochlamys* does to *Cassinia*. It is a tall, glandular, highly aromatic biennial herb (resembling a tobacco plant), with large broad wrinkled stem-clasping leaves and a very large, loose, gracefully pendulous, terminal panicle of thinly-textured reddish capitula, the achenes also glandular. The writer believes that *Calomeria* should remain monotypic, and that the four other Australian taxa currently placed under *Humea* should be referred to

Haeckeria F. Muell.—woody perennials having stiff, linear, rather ericoid leaves (clustered or even imbricate) and the white or yellow heads forming compact corymbs. In habit, species of *Haeckeria* strongly resemble those of *Cassinia*, but differ in the total absence of both pappus and receptacular scales. *H. cassiniiformis* F. Muell. (the type species, endemic on Eyre Peninsuala, S.A.) and *H. ozothamnoides* F. Muell. (Vic. & N.S.W) need no change of name; but new combinations under *Haeckeria* are required for *Humea punctulata* F. Muell. (S.A. only) and *H. pholidota* (F. Muell.) J. M. Black of mallee tracts in S.A., Vic. and N.S.W. These transfers are effected hereunder:

HAECKERIA PHOLIDOTA (*F. Muell.*) *J. H. Willis* comb. nov.

Ozothamnus pholidotus F. Muell. *Fragm. Phyt. Aust.* 2: 131 (1861); *Humea pholidota* (F. Muell.) J. M. Black in *Trans. roy Soc. S. Aust.* 43: 43 (1919).

HAECKERIA PUNCTULATA (*F. Muell.*) *J. H. Willis* comb. nov.

Humea punctulata F. Muell. *Fragm. Phyt. Aust.* 3: 137 (1863); *Cassinia punctulata* (F. Muell.) F. Muell. & R. Tate ex R. Tate *Handb. Flor. extratrop. S. Aust.* 241 (1890).

In Hj. Eichler's *Suppl. J. M. Black's Flor. S. Aust.* 316 & 323 (1965), both *Humea punctulata* F. Muell. and *Cassinia complanata* J. M. Black are synonymized under the name *C. punctulata* (*l.c.*)—a procedure with which the present writer cannot agree. The type of *H. punctulata* (MEL) from Flinders and Elders Ranges supports its complete separation from *C. complanata* [= *C. uncata* A. Cunn. ex DC.], as set out by Black in his *Flor. S. Aust.* ed 2: 919 (1957): the former is totally glabrous, but has prominent resin-glands in the trigonal straight-pointed leaves, and extremely narrow, single-flowered capitula; the latter is more or less scabrid-hairy (especially on axes of the inflorescence), with flattened but revolute leaves that are uncate at their tips and with broader capitula each bearing several florets. Certainly, capitula on the type of *H. punctulata* are very immature, but their minute florets fail to show any vestige of a pappus, the bristles of which are always discernible on *Cassinia* at comparable stages of development. Reasons have been advanced elsewhere in this paper for the writer's action in relegating *Cassinia complanata* to synonymy under *C. uncata* A. Cunn. ex DC.

SENECIO BRUNONIS (*Hook. f.*) *J. H. Willis* comb. nov.

Centropappus Brunonis Hook. f. in *Lond. J. Bot.* 6: 124 (1847); *Senecio centropappus* F. Muell. *Annu. Rep. Govt. Bot. 1858*: 26 (1858) atque in Benth. *Flor. aust.* 3: 666 (1866)—nom. illegit.

In transferring the only known species of *Centropappus* Hook. f. to *Senecio* L., F. Mueller (*l.c.*) should have retained its specific epithet "*brunonis*". He may have been dissuaded from so doing by pre-existence of the similar name *S. brunonianus* Hook. & Arn.

(1841), based upon a Chilean type. *Brunonis* and *brunonianus*, however, are not etymological variants but different epithets, and they may be used simultaneously for two species in the same genus. Under the existing International Code it becomes obligatory to adopt the name *S. brunonis*, for which the above new combination was required.

Senecio brunonis is at once the largest, most interesting and one of the most localized groundsels in Australia, being endemic on Mts. Wellington and Dromedary in southern Tasmania at altitudes between 2,500 and 3,800 feet. There it forms a small pyramidal tree 6–12 feet high, with spreading, linear, aromatic, rather viscid leaves (2–4 inches long) and laminating papery bark. In far southern New Zealand, *S. reinoldii* and *S. stewartiae* also attain tree size (to 19 feet or more), as does the related *S. huntii* on Chatham Islands.

BEDFORDIA SALICINA (*Labill.*) *DC.* Prodr. *6*: 441 (1838).

G. Bentham's observations on thousands of species of Australian plants are amazing for their meticulous attention to detail and general accuracy, especially when one bears in mind that this savant worked almost solely from limited amounts of dry herbarium material. It is the more curious, therefore, that in *Flor. aust. 3*: 673 (1866) he should have initiated a major error of description, blindly perpetuated by succeeding authors to the present day. Bentham states that the genus *Bedfordia* comprises " shrubs more or less stellate-tomentose ", commenting also: " F. Mueller has proposed to unite it with *Senecio*, but the stellate tomentum and axillary inflorescence are quite unknown in that extensive genus. In Mueller's *Key Syst. Vict. Plant. 1*: 340 (1888), *Senecio Bedfordi* [= *Bedfordia salicina*] is said to be " invested with whitish or greyish stellular hairlets ". Similar statements occur in C. Moore's *Handb. Flor. N.S.W.* 298 (1893) and A. J. Ewart's *Flor. Vict.* 1178 (1931). As recently as 1963, Dr. Winifred Curtis (*Student's Flor. Tasm. 2*: 287) has made its " stellate indumentum " the main key character separating *Bedfordia* from *Senecio*.

Examination of a wide range of *Bedfordia* specimens in Melbourne Herbarium has failed to reveal a single stellate hair, either on the branchlets, foliage or inflorescences, and this criterion is now considered to be no more than an illusion. The whitish, thickly woolly vestiture in *Bedfordia* consists entirely of simple, but highly cirriform hairs; sometimes, as on the upper surfaces of young leaves, these hairs may arise and intricately intertwine in little groups, and such a characteristic could perhaps have misled Bentham into interpreting them as true stellulae. In general, mainland examples of *B. salicina* have rather longer looser hairs than their Tasmanian counterparts.

Another inexplicable feature is Labillardière's choice of epithet, when describing his *Cacalia salicina*—surely few plants could be less like a willow than the Australian " blanket-leaf "!